DOCUMENT RESUME

ED 343 108 CS 010 883

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TITLE Reading Recovery Program 1990-91. Final Evaluation Report. Elementary and Secondary Education Act-Chapter 1.
INSTITUTION Columbus Public Schools, OH. Dept. of Program Evaluation.
PUB DATE 13 Dec 91
NOTE 88p.; For 1989-90 report, see ED 327 821.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Beginning Reading; Compensatory Education; Early Intervention; Family Involvement; Grade 1; High Risk Students; Individual Instruction; *Instructional Effectiveness; Primary Education; Program Evaluation; Reading Improvement; Reading Programs; Reading Research; *Remedial Reading
IDENTIFIERS *Columbus Public Schools OH; Metropolitan Achievement Tests; *Reading Recovery Projects

ABSTRACT

The purpose of the 1990-91 Reading Recovery Program in the Columbus, Ohio public schools was to provide early intervention to underachieving first-grade pupils who appeared unlikely to read successfully without intensive instruction. The program featured individualized one-on-one lessons provided by specially trained teachers. The lessons were based upon diagnostic instruments designed to provide a comprehensive assessment of the pupil's development of reading and writing strategies. Daily 30-minute individualized lessons included a variety of instructional activities designed to help pupils develop reading strategies. The major evaluation effort was accomplished through administration of Metropolitan Achievement Tests and locally constructed instruments. The program served 297 pupils in 38 elementary schools, with an average pupil enrollment of 64.8 days. Of this group, 139 students were included in the evaluation sample. Results indicated that the three desired outcomes were met: (1) 69.8% of the pupils had a normal curve equivalent (NCE) gain of 3.0 or better; (2) 96.1% of the pupils were not retained in grade 1; and (3) 98.1% of the pupils had parental involvement. Results also indicated that 80.8% of the teachers believed the program was of value to their pupils, and that the program was expensive in comparison to other compensatory programs. Findings support the continuation of the program. (Eight specific recommendations and 23 tables of data are included; survey instruments, record-keeping sheets, and comments from the classroom teacher survey are attached.) (RS)

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Elementary and Secondary Education Act - Chapter 1

FINAL EVALUATION REPORT

READING RECOVERY PROGRAM

1990-91

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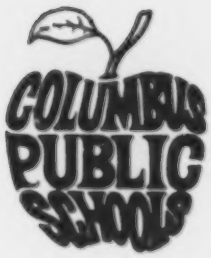

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Elementary and Secondary Education Act - Chapter 1

FINAL EVALUATION REPORT

READING RECOVERY PROGRAM

1990-91

ABSTRACT

Program Description: The purpose of the 1990-91 Reading Recovery program was to provide early intervention to underachieving first-grade pupils who appeared unlikely to learn to read successfully without intensive instruction. The program featured individualized one-on-one lessons provided by specially trained teachers. The lessons were based upon diagnostic instruments designed to provide a comprehensive assessment of the pupil's development of reading and writing strategies.

The Reading Recovery program was piloted in Columbus Public Schools during the 1984-85 school year, with the 1990-91 school year being the seventh continuous year of the program. The program was a joint effort of educators in the Columbus Public Schools, the College of Education of The Ohio State University, and the Ohio Department of Education and was funded by Elementary and Secondary Education (ESEA) - Chapter 1 monies. During 1990-91 the Reading Recovery program was located in 38 elementary schools, had a staff of 60 teachers (20.0 FTEs) and served 297 pupils. Some teachers served part-time in the program and part-time as first-grade teachers, while others served part-time in the program and part-time in another compensatory education program.

Time Interval: For evaluation purposes the Reading Recovery program started on September 24, 1990 and continued through May 17, 1991. Pupils included in the final analyses for Desired Outcomes 2 and 3 must have received 60 or more instructional lessons or have been successfully discontinued (completed) from the program; for Desired Outcome 1 they also must have had a valid pre- and posttest score on a nationally standardized achievement test to be included in the final analyses.

Activities: To help pupils develop reading strategies, daily 30-minute individualized lessons included a variety of instructional activities, such as reading and re-reading books while the teacher recorded their strategies and errors, writing and reading their own stories, letter identification, and sound analysis of words.

Achievement Objective: Pupils were to receive Reading Recovery instruction until they were ready to be successfully discontinued from the program. Discontinued pupils were those who successfully completed the program according to (a) predetermined levels on diagnostic measures indicating that the pupils were reading at the average level for the district, and (b) teacher judgment that the pupils had developed effective reading strategies and could learn in the normal classroom setting without extra individual help.

Evaluation Design: The evaluation design included three desired outcomes: (a) at least 50 percent of the pupils who were discontinued or who had received 60 or more lessons would gain at least 3.0 normal curve equivalent (NCE) points in total reading, the gain being measured on a nationally standardized achievement

test; (b) at least 50 percent of the pupils who were discontinued or who had received 60 or more lessons would not be retained; and (c) at least 75 percent of parents whose children were discontinued or received 60 or more lessons would become involved in the program. In addition to the three desired outcomes, five evaluation questions were included in the evaluation design based upon two major program goals: to develop and provide the Reading Recovery program for first grade children, and to adopt and apply the necessary inservice program for teachers. Questions were asked in the following areas: (a) service patterns of pupils; (b) performance levels of Reading Recovery pupils on a standardized test of reading; (c) classroom teacher ratings of pupils served by Reading Recovery during the 1989-90 school year and classroom teacher attitudes regarding the Reading Recovery program; (d) costs of the Reading Recovery program versus other compensatory programs; and (e) long term effects.

The major evaluation effort was to be accomplished through the administration of the Metropolitan Achievement Tests, Level Preprimer, Form L, 1985 (MAT6) for pretesting and Level Primer, Form L, 1985 (MAT6) for posttesting. Analyses of the standardized test data included percentiles, districtwide average NCE scores, and pretest-posttest NCE gains. Locally constructed instruments were used to collect enrollment/attendance, parent involvement, and survey (attitude) data. District computer files were used for retention data.

Major Findings/Recommendations: The Reading Recovery program served 297 pupils in 1990-91, with average pupil enrollment of 64.8 days. Average pupil attendance was 56.1 days and the average number of instructional lessons was 46.1. The treatment group consisted of the 154 pupils who were either discontinued (120) or received 60 or more lessons but not discontinued (34). Program developers have estimated that most pupils need approximately 60 lessons to complete the program. Of this group, 139 pupils had reported and valid scores for both the MAT6 pretest and posttest and were included in the evaluation sample.

Each of the three desired outcomes for the 1990-91 Reading Recovery program were met. Of the 139 pupils in the evaluation sample, 69.8% (97) had an NCE gain of 3.0 or better (the criterion for the desired outcome was 50.0%). Of the 154 pupils in the treatment group, retention data were available on 153. Of these, 96.1% (147) were not retained in grade one. Of the 154 treatment group pupils, 98.1% (151) had parental involvement in the program (the criterion for retention was 50.0% and parent involvement was 75.0%).

The mean NCE scores on the pretest and posttest were 22.9 (national percentile rank 10.0) and 39.6 (national percentile rank 31.0) respectively. The average growth was 16.8 NCEs. Overall, 91 (65.5%) of the 139 evaluation sample pupils gained 7.0 or more NCEs. Forty-three (30.9%) of the evaluation sample pupils reached the average NCE (45.6) for the district as a whole. The percentages of pupils who were at various percentile levels on the posttest were as follows: (a) 23.7% (33) were at the 50%ile or above (grade level); and (b) 62.6% (87) were below the 37%ile and still eligible for Chapter 1 services.

The Classroom Teacher Survey included ratings related to the reading performance in 1990-91 of pupils who received Reading Recovery service in 1989-90. On a scale that ranged from 5 (very successful) to 1 (very unsuccessful), the average rating on four reading items were as follows. For grade 1 (retained) pupils, the average ratings ranged from 3.14 to 2.93. For grade 2 pupils, the average ratings ranged from 3.40 to 3.10. By pupil

category, discontinued pupil average ratings for the four items ranged from 3.57 to 3.25, compared with 2.96 to 2.62 for not discontinued pupils. Of the teachers responding to the survey who had the Reading Recovery program serving children at their school during 1990-91, 80.8% (42) found the program to be of value to their pupils, and 75.5% (40) found the funding for the program to be appropriate.

The cost per pupil served in the 1990-91 Reading Recovery program ($2,667) indicated that Reading Recovery was expensive in comparison to the other compensatory programs, with costs per pupil served of $697 for the Instructional Assistant program and $655 for the Early Literacy program (grade 1).

Results of the analyses of the long-term effects of Reading Recovery revealed the following. Of the former Reading Recovery pupils who were in a school and at a grade level where a compensatory education program was in operation in 1990-91, 48.8% (79) of the pupils from the 1988-89 treatment group and 47.3% (98) of the pupils from the 1989-90 treatment group were still being served in a compensatory education program. When tested in second grade, the district average NCE score in Vocabulary was reached by 17.0% (27) of the pupils from the 1989-90 treatment group. The district average NCE score for Vocabulary was 47. In Reading Comprehension, the district average NCE score (48) was reached by 23.9% (38) of the pupils in the 1989-90 treatment group. In Total Reading the district average NCE score was reached by 20.8% (33) of the pupils in the same treatment group, with the district average NCE score in Total Reading being 47. Of the 469 pupils from the 1988-89, 1989-90, and 1990-91 treatment groups who remained in the Columbus Public Schools through November 1991, 77.2% (362) followed a normal grade-level progression. The retention rates for grade 1 were: 21.6% for the 1988-89 treatment group, 13.7% for the 1989-90 treatment group, 4.1% for the 1990-91 treatment group, and 13.7% for the three treatment groups combined. The percentages of pupils from the treatment groups who were served in special education were: for the 1988-89 treatment group, 14.7% in November 1989, 17.1% in November 1990, and 21.9% in November 1991; for the 1989-90 treatment group, 9.3% in November 1990 and 12.4% in November 1991; and for the 1990-91 treatment group, 4.1% in November 1991. Pupils were served more frequently for communication disorders related to speech and hearing problems in the year directly following their enrollment in Reading Recovery, with increasing numbers of pupils served for developmental handicaps and learning disabilities in subsequent years.

Based on evaluation results it is recommended that the Reading Recovery program be continued, with attention given to the following additional recommendations: (a) exploring ways to reduce the amount of time program teachers spend with record keeping; (b) establishing absolute criterion for discontinuing pupils and exploring the reasons pupils who have previously received Reading Recovery service are later enrolled in compensatory programs; (c) identifying pupils needing special education instruction at the earliest possible date; (d) continuing to closely monitor program funding; (e) establishing a structured process observation procedure; (f) maintaining existing instruments for data collection; (g) maintaining a viable inservice program for program teachers; and (h) streamlining the organizational model for the program.

Elementary and Secondary Education Act - Chapter 1

FINAL EVALUATION REPORT

READING RECOVERY PROGRAM

1990-91

Program Description

The purpose of the 1990-1991 Reading Recovery program was to provide early intervention to underachieving first-grade pupils who appeared unlikely to learn to read successfully without intensive instruction. To accomplish this purpose the program featured individualized one-on-one lessons 30 minutes daily provided by specially trained teachers. The lessons were based upon diagnostic instruments which were designed to provide a comprehensive assessment of the pupil's development of reading and writing strategies.

The Reading Recovery program began in Columbus Public Schools during the 1984-85 school year, with a pilot program at 6 schools, serving 70 pupils taught by 14 teachers. During 1990-91, the program served 297 pupils at 38 schools, with a teaching staff of 60 teachers (20.0 FTEs--Full Time Equivalents). Table 1 shows staffing, number of schools, and pupils served for the seven years of the program's existence.

Some Reading Recovery teachers were assigned to schools in teams of two. Each teacher served half-time in the Reading Recovery and Early Literacy programs and half-time as a first-grade teacher. During the half-day the teachers served in the two programs they worked with two or three Reading Recovery pupils individually for 30 minutes each and one group of Early Literacy pupils for 40-45 minutes. One member of the team taught in the two programs in the morning while the other member taught a first grade class. Their assignments were reversed in the afternoon. Other Reading Recovery teachers taught in the Reading Recovery and Early Literacy programs all day, usually serving three individual Reading Recovery pupils and four groups of Early Literacy pupils daily.

In 1990-91 the Reading Recovery program was located in the following 38 elementary schools.

Schools Served by the
Reading Recovery Program
1990-91

Arlington Park	East Linden	Koebel	Second
Avondale	Fair	Lincoln Park	Siebert
Beck	Fairwood	Linden	South Mifflin
Broadleigh	Franklinton	Livingston	Southwood
Burroughs	Hamilton	Main	Sullivant
Cranbrook	Heyl	Medary	Trevitt
Dana	Highland	Moler	Weinland Park
Deshler	Hubbard	Ohio	West Broad
Eakin	Hudson	Pilgrim	
East Columbus	Kent	Reeb	

Schools were chosen for inclusion in the program according to the percent of pupils attending a school who were eligible for a free or reduced priced lunch

Table 1

Staffing, Schools and Pupils Served
Reading Recovery Program
Columbus Public Schools
1984-1991

School Year	Teachers	Teacher Full-Time Equivalents (FTE)	Schools	Pupils Served
1984-85[a]	14	7.0	6	70
1985-86	30	16.0	12	224
1986-87	52	26.0	20	335
1987-88	57[b]	29.0	26	393
1988-89	49[b]	23.8	26	283
1989-90	66[c]	29.0	31	514[d]
1990-91	60[e]	20.0	38	297

[a]Pilot year.
[b]Plus support staff including 3 teacher leaders and 1 Ohio State University affiliated teacher.
[c]Includes 5 teacher leaders and 3 teacher leaders-in-training.
[d]Includes 150 pupils with group service only.
[e]Includes 2 teacher leaders and 3 teacher leaders-in-training.

(F & RPL). Those schools with the highest percentage F & RPL are included in the program each year, with the total number of schools involved in the program for a given year determined by the availability of funding for that year.

The 58 program teachers received support from 2 teacher leaders who served as trainers, resource teachers, program coordinators, and program teachers. The teacher leaders taught a required credit course for the first-year Reading Recovery teachers (13 teachers out of 58) and provided inservice training for the experienced program teachers (42 teachers out of 58). Additionally, 3 of the 58 teachers received extended training to become future teacher leaders. Funding for the program was provided by Elementary and Secondary Education (ESEA) - Chapter 1 monies.

At the beginning of the year, classroom teachers selected first-grade pupils who appeared to be most in need of reading help to take the Diagnostic Survey of reading and writing tests: Letter Identification, Ohio Word Test, Concepts About Print, Writing Vocabulary, Dictation Test, and Text Reading Level. These tests were also administered at various times throughout the school year as pupils entered or exited the program and again at the conclusion of the program year.

Pupils were selected for the Reading Recovery program based on two criteria: (a) a Service Index Number based on a selection test (Metropolitan Achievement Test, 1978, Level Primer, Form JS) and (b) low scores on the Diagnostic Survey. A Service Index Number indicates the degree to which a pupil is achieving relative to the pupil's age and appropriate grade level. To be eligible pupils must have had a Service Index Number less than 43.0. Low scores on the diagnostic tests further indicated that the pupils were not likely to learn to read successfully in a regular classroom environment without extra individual help. Selection of pupils occurred prior to administration of the program norm-referenced pretest (Metropolitan Achievement Tests--MAT6, 1985, Preprimer, Form L).

Each pupil enrolled for individual service in the program spent approximately the first 10 days "Roaming Around the Known." During this period the Reading Recovery teacher built rapport with the pupil and provided an opportunity for the pupil to use the strategies he or she already knew in meaningful reading and writing activities. Once the Reading Recovery lessons began, a familiar pattern was established. A typical 30-minute lesson included most or all of the following activities.

1. Two or more familiar books from previous lessons were selected by the pupil to be read to the teacher.

2. The teacher made a running record while the pupil read the book that was introduced to the pupil and attempted on the previous day. During this time the Reading Recovery teacher changed the focus from instruction to observation. Meaning, structure, and visual cues were analyzed to determine which cues were used or neglected by the pupil. Each day the teacher carefully recorded the pupil's development of reading strategies (e.g., self-monitoring, searching for cues, cross-checking, self-correcting) or ability to determine the meaning of continuous text.

3. During letter identification, plastic letters were used on a magnetic board.

4. The pupil dictated a story and then learned to write and read it with the teacher's help.

5. During sound analysis of words from a written story, the pupil was encouraged to say the words slowly and write what could be heard.

6. A completed story was cut into separate words, which were scrambled, and then rearranged in the correct order by the pupil.

7. A new book was introduced by the teacher.

8. The new book was attempted by the pupil.

When it was determined by the Reading Recovery teacher, in consultation with the classroom teacher and the teacher leader, that a pupil had made sufficient progress to work successfully in the normal classroom setting without extra help, the pupil was recommended to be discontinued. Discontinued pupils were defined as those who had successfully completed the program according to predetermined levels on the diagnostic measures and had been released from the program. When pupils left the program (e.g., were discontinued, moved from the school, were placed in special programs), pupils entered the program either from the Early Literacy program or from a waiting list.

Evaluation Design

For program year 1990-91, three desired outcomes were established for the Reading Recovery program.

Desired Outcome 1:

At least 50 percent of the program pupils (pupils discontinued or having had 60 or more lessons) will gain at least 3.0 normal curve equivalent (NCE) points in total reading. Gain will be measured by a nationally standardized achievement test.

Desired Outcome 2:

At least 50 percent of program pupils will not be retained.

Desired Outcome 3:

At least 75 percent of parents of program pupils will become involved in the program through observations, conferences or home participation.

In addition to the desired outcomes, an evaluation design was developed based on two goals identified from the 1984-85 proposal:

1. To develop and provide the Reading Recovery program for first-grade pupils.

   The individual child who has been identified as being "at risk" of failure has recovered essential reading strategies and can function satisfactorily in the regular classroom.

2. To adapt and apply the necessary inservice program for teachers.

   To implement the Reading Recovery techniques, teachers will receive intensive training over the period of a year while simultaneously implementing the program with children through clinical and peer-critiquing experiences guided by a skilled instructor.

Based on these two goals, five evaluation questions regarding the 1990-91 Reading Recovery program were developed. The questions focused on the following areas: service patterns, pretest-posttest performance on a standardized test of reading, attitudes of professional staff, costs of Reading Recovery versus other compensatory programs, and long-term effects of the program. The specific evaluation questions and analyses for each are listed below.

Question 1 What were the service patterns of pupils in the Reading Recovery program?

Analysis 1.1 Number of pupils who were served.

Analysis 1.2 Number of pupils who were discontinued.

Analysis 1.3 Demographic characteristics of pupils who were served.

Analysis 1.4 Demographic characteristics of pupils who were discontinued.

Question 2 What were the performance levels of Reading Recovery pupils on a standardized test of reading?

Analysis 2.1 Number and percent of pupils reaching the 50%ile in Total Reading on the MAT6.

Analysis 2.2 Number and percent of pupils reaching the 37%ile in Total Reading on the MAT6.

Analysis 2.3 Number and percent of pupils reaching the average NCE for the district in Total Reading on the MAT6. (Analysis will be based on available data. Availability of data will come from schools involved in other programs requiring total school testing.)

Analysis 2.4 Number and percent of pupils who have shown a gain of seven NCE points between pretest and posttest in Total Reading on the MAT6.

Analysis 2.5 Analysis of central tendency and distribution of NCE scores on the pretest and posttest of Total Reading on the MAT6.

Question 3 What were the teacher ratings in 1990-91 of pupils who were served by Reading Recovery during the 1989-90 school year? What were the attitudes of these teachers regarding the Reading Recovery program?

Analysis 3.1 Frequency counts, percents, and content analysis of

the survey of teachers who had pupils in 1990-91 who were served by Reading Recovery in the 1989-90 treatment group (Classroom Teacher Survey).

Question 4 What were the costs of the Reading Recovery program compared to other compensatory programs?

Analysis 4.1 Costs per pupil of each program.

Question 5 What were the long-term effects of the Reading Recovery program?

Analysis 5.1 Number and percent of pupils in the 1988-89 and 1989-90 Reading Recovery treatment groups who in 1990-91 attended a school where a compensatory program was available and who were served by a compensatory program.

Analysis 5.2 Number and percent of pupils in the 1989-90 Reading Recovery treatment group scoring at or above the average NCE of the district in Vocabulary, Reading Comprehension, and Total Reading on the Comprehensive Test of Basic Skills (CTBS) in April 1991.

Analysis 5.3 Number and percent of pupils in the 1988-89 and 1989-90 Reading Recovery treatment groups scoring at or above the 37%ile in Vocabulary, Reading Comprehension, and Total Reading on the CTBS in April 1991.

Analysis 5.4 Number and percent of pupils in the 1988-89 and 1989-90 Reading Recovery treatment groups scoring at or above the 50%ile in Vocabulary, Reading Comprehension, and Total Reading on the CTBS in April 1991.

Analysis 5.5 Number and percent of pupils in the 1988-89, 1989-90, and 1990-91 Reading Recovery treatment groups who followed a normal grade level progression.

Analysis 5.6 Number and percent of pupils in the 1988-89, 1989-90, and 1990-91 Reading Recovery treatment groups who were later identified and served in a special education class.

The evaluation design provided for the collection of data in the following six areas of operation for the overall program.

1. Teacher Census Form (TCF) was completed by program teachers to obtain staffing information, including employment status, periods of program instruction, school assignment, and Chapter 1 involvement (see p. 47, Appendix A).

2. Calendar Worksheet/Parent Involvement Log (CW/PIL) was used to record pupil service information, Service Index Numbers, and parent involvement data (see pp. 49-50, Appendix B).

3. Pupil Enrollment Roster (PER) was completed by program teachers to indicate official enrollment of each pupil into the program. Program teachers identified pupils served from computer generated lists of all first grade pupils in their buildings. Information included pupil name, student number, date of birth, program teacher name, school code, and program code.

4. Pupil Data Sheet (PDS) was a computer generated preprinted form used by program teachers to record enrollment/attendance data, number of lessons, parent involvement, discontinued status, hours of instruction per week, English-speaking ability, and progress made for each pupil served (see p. 52, Appendix C).

5. The Metropolitan Achievement Tests (MAT6, 1985) was used as the pretest and posttest for all pupils in the Reading Recovery program. This test series has empirical norms for fall and spring, established October 1-31, 1984, and April 8 to May 15, 1985. The description of the MAT6 pretest and posttest is as follows:

	Level	Form	Recommended Grade Range	Subtests	Number of Items
Pretest	Preprimer	L	K.0-K.9	Total Reading	54
Posttest	Primer	L	K.5-1.9	Vocabulary	15
				Word Recognition Skills	36
				Reading Comprehension	38
				Total Reading	89

The MAT6 tests were administered by classroom and program teachers. Pretesting occurred September 18-22, 1990. Posttesting occurred April 8-12, 1991. All testing was done on level, as indicated in the table above.

5. The Reading Recovery Classroom Teacher Survey was used to obtain information from teachers instructing pupils who were served by the Reading Recovery program during the 1989-90 school year. Data collection was completed in May 1991 (see pp. 54-57, Appendix D).

6. Data collection for the Reading Recovery program also utilized district computer files for retention data.

Inservice evaluation information, data which were not specified in the Reading Recovery evaluation design but were collected routinely, is not included here but has been submitted to the Department of Federal and State Programs.

Major Findings

Pupils Served

During the 1990-91 school year, a total of 297 pupils were served by the Reading Recovery program. The treatment group for 1990-91 was limited to the 120 pupils who were discontinued and the 34 additional pupils who had a minimum of 60 lessons but were not discontinued (a total of 154 pupils). The use of the 60 lesson distinction was based upon the premise in Marie Clay's research in New Zealand (1979) which determined that an average of 60 lessons was needed for pupils to be discontinued and to continue to work successfully in the normal classroom setting. Thus, the 143 other pupils served were excluded from the treatment group. The evaluation sample was restricted to those pupils who were in the treatment group, were English-speaking, had both pretest and posttest administrations of the standardized achievement test (MAT6), and had a valid MAT6 Total Reading score for both pretest and posttest. Of the 154 pupils in the treatment group, 15 pupils were excluded from the evaluation sample because of incomplete test data. The evaluation sample was comprised of the remaining 139 pupils, which was 90.3% of the treatment group and 46.8% of the 297 pupils served.

Desired Outcome 1:

> At least 50 percent of the program pupils (pupils discontinued or having had 60 or more lessons) will gain at least 3.0 normal curve equivalent (NCE) points in Total Reading. Gain will be measured by a nationally standardized achievement test.

A total of 139 pupils were discontinued from the Reading Recovery program or had received 60 or more lessons during the school year and had both pre- and posttest scores in Total Reading on the MAT6. These 139 pupils comprised the evaluation sample for the Reading Recovery program for 1990-91. Of these 139 pupils, 97 (69.8%) had an NCE gain of at least 3.0 points in Total Reading, thus allowing Desired Outcome 1 to be met.

Desired Outcome 2:

> At least 50 percent of program pupils will not be retained.

Desired Outcome 2 was based on the number of pupils who were discontinued from the Reading Recovery program or had received 60 or more lessons during the school year. A total of 154 pupils met one of these criterion. These 154 pupils formed the treatment group for 1990-91. Of these 154 pupils, retention data was available for 153, of which 147 (96.1%) were not retained. Thus, Desired Outcome 2 was met.

Desired Outcome 3:

> At least 75 percent of parents of program pupils will become involved in the program through observations, conferences or home participation.

Desired Outcome 3 was based on the 154 pupils in the 1990-91 treatment group. Of these 154 pupils, 151 (98.1%) had the appropriate parent involvement in the program that allowed Desired Outcome 3 to be met.

Question 1 What were the service patterns of pupils in the Reading Recovery program?

Analysis 1.1 Number of pupils who were served.

Analysis 1.2 Number of pupils who were discontinued.

Analysis 1.3 Demographic characteristics of pupils who were served.

Analysis 1.4 Demographic characteristics of pupils who were discontinued.

The service patterns of the Reading Recovery program are reported below in the following order: the number of pupils who were served and their demographic characteristics; the number of lessons received; and the number of pupils who were discontinued and their demographic characteristics.

The 1990-91 Reading Recovery program served a total of 297 first-grade pupils in 38 schools (see Table 1, page 2). During 1989-90, 514 pupils were served in 31 schools, a decrease in pupils served of approximately 42% (217 pupils) for school year 1990-91. This decrease in pupils served resulted in part from a decrease in program teachers from 29.0 FTE to 20.0 FTE, a 31.0% decrease in teaching staff and also from the elimination of small group (Adaptation Group) service from the Reading Recovery program during the 1990-91 school year. During 1990-91, Reading Recovery Adaptation Group service (5-7 pupils per group) became known as the Early Literacy program and Reading Recovery returned to being only individual, one-to-one service as it had been during the 1988-89 school year. Reading Recovery pupils received 30-minute lessons daily, for an average of 2.5 hours of instruction per week.

The demographic characteristics (gender, race, and socio-economic status) of the 297 pupils who were served in the program were analyzed from the school district's Student Master File (SMF), Pupil Information File (PIF), and November 1990 official enrollment tape. The data were based on information reported by parents and/or school personnel. Of the pupils served, 55.2% (164) were boys and 44.8% (133) were girls (see Table 2). As for the distribution by race, 41.1% (122) of the pupils served were identified as Non-Minority, 56.9% (169) were Black, and the remaining 2.0% (6) were Other Minority (see Table 3). The Other Minority category included Spanish Surname, Asian American, and American Indian. Socio-economic status was indicated by pupil eligibility for subsidized (free or reduced-price) lunch as of June 1991. Of the 297 pupils served, 81.5% (242) were on free lunch, 6.7% (20) were on reduced-price lunch, and 11.8% (35) were not on subsidized lunch (see Table 4).

For evaluation purposes, the pupils served in the program were divided into three categories: discontinued pupils (those who had successfully completed the program); not discontinued pupils who had received 60 or more lessons, and other pupils served (those who were not discontinued and who received fewer than 60 lessons). Of the 297 pupils served during 1990-91, 40.4% (120) were discontinued, 11.4% (34) were not discontinued but received 60 or more lessons, and 48.1% (143) were other pupils served (see Table 5). For 1989-90, program

Table 2

Percent and Number of Reading Recovery Pupils Served by Gender 1990-91

Gender	%	(N)
Boys	55.2	(164)
Girls	44.8	(133)
Total	100.0	(297)

Table 3

Percent and Number of Reading Recovery Pupils Served by Race 1990-91

Race	%	(N)
Non-Minority	41.1	(122)
Black	56.9	(169)
Other Minority[a]	2.0	(6)
Total	100.0	(297)

[a]Includes Spanish Surname, Asian American, and American Indian

Table 4

Percent and Number of Reading Recovery Pupils Served by Subsidized Lunch Status 1990-91

Subsidized Lunch Status	%	(N)
Free	81.5	(242)
Reduced	6.7	(20)
Paying	11.8	(35)
Total	100.0	(297)

Note. Based on June 1991 data

Table 5

Percent and Number of Reading Recovery Pupils Served by Pupil Category and Number of Lessons 1990-91

Number of Lessons	Pupil Category: Discontinued Pupils[a]		Pupil Category: Not Discontinued Pupils[b]		Pupil Category: Other Pupils Served[c]		Total Pupils Served	
	%	(N)	%	(N)	%	(N)	%	(N)
Fewer than 60								
0-9	0.0	(0)			21.0	(30)	10.1	(30)
10-19	3.3	(4)			15.4	(22)	8.8	(26)
20-29	7.5	(9)			11.9	(17)	8.8	(26)
30-39	10.8	(13)			18.9	(27)	13.5	(40)
40-49	20.8	(25)			21.0	(30)	18.5	(55)
50-59	20.0	(24)			11.9	(17)	13.8	(41)
Subtotal	62.5	(75)			100.0	(143)	73.4	(218)
60 or More								
60-69	11.7	(14)	29.4	(10)			8.1	(24)
70-79	3.3	(4)	17.6	(6)			3.4	(10)
80-89	11.7	(14)	14.7	(5)			6.4	(19)
90-99	5.8	(7)	11.8	(4)			3.7	(11)
100-109	3.3	(4)	14.7	(5)			3.0	(9)
110-119	1.7	(2)	11.8	(4)			2.0	(6)
120-129	0.0	(0)	0.0	(0)			0.0	(0)
130-139	0.0	(0)	0.0	(0)			0.0	(0)
Subtotal	37.5	(45)	100.0	(34)			26.6	(79)
Total	100.0	(120)	100.0	(34)	100.0	(143)	100.0	(297)

[a] Discontinued pupils could have any number of lessons
[b] Not discontinued pupils with 60 or more lessons
[c] Other pupils served with fewer than 60 lessons

data revealed that 39.6% of pupils were discontinued, 20.3% were not discontinued but received 60 or more lessons, and 40.1% were other pupils served. The data show that the percent of pupils discontinued remained approximately the same but that the percent of pupils who received 60 or more lessons but were not discontinued decreased.

The number of lessons completed by pupils ranged from none to 118, with an average of 46.0 lessons, compared to an average of 53.0 lessons in 1989-90. Enrollment data indicate that for 1990-91, average pupil enrollment was 64.8 days, compared to average pupil enrollment of 101.6 days in 1989-90. The decrease in average pupil enrollment from 101.6 days to 64.8 days can in part be attributed to the establishment of the Early Literacy program in 1990-91. During 1989-90, small group Reading Recovery service (which became the Early Literacy program) was provided for qualified pupils. Enrollment in either small group or individual service counted as days of pupil enrollment in the Reading Recovery program. Most pupils remained in the program the entire school year unless they were discontinued or moved to another school where Reading Recovery was not offered. During 1990-91, Early Literacy (small group service) became a separate program. During the year, a number of first grade pupils began service in the Early Literacy program and later transferred to the Reading Recovery program as space became available. This process decreased the average number of days pupils were enrolled in Reading Recovery. The number of lessons completed is less than the number of days of enrollment for a number of reasons. First, actual days of attendance is less than days enrolled because of pupil absence. Average pupil attendance in 1990-91 was 56.1 days, compared to average pupil enrollment of 64.8 days. Also, pupils did not receive lessons during their first 10 days of attendance while they were "Roaming in the Known." The average number of pupils served by each of the 60 teachers (20.0 FTE) was 14.9 pupils and the average number of pupils discontinued by each teacher was 6.0 pupils, compared to 5.0 pupils per teacher discontinued in 1989-90.

A continuing concern of program planners is how long to serve pupils who appear to make little or no progress after a large number of lessons. Approximately 60 lessons are considered necessary for most pupils to successfully complete the program. However, in 1990-91, the number of lessons needed by pupils to be discontinued varied greatly. For example, four pupils were discontinued with less than 20 lessons but six other pupils were not discontinued after 100 or more lessons. The number of lessons completed by pupils who were discontinued ranged from 10 to 115, with an average of 57.1 lessons. The number of lessons completed by pupils who were not discontinued (the two other pupil categories combined) ranged from 0 to 118 lessons, with an average of 38.6 lessons. Of the 79 pupils who received 60 or more lessons, 57.0% (45) were discontinued and 43.0% (34) were not discontinued. A distribution of the number of lessons completed by pupils in the three pupil categories is shown in Table 5.

An examination of the 120 pupils who were discontinued from the program revealed that an almost equal number of boys and girls were discontinued, with 50.8% (61) being boys and 49.2% (59) being girls (see Table 6), even though more boys than girls (164 to 133) received program service. Of the 164 boys served, 37.2% were discontinued compared to 44.4% of the 133 girls served. The analysis by race indicated that 56.7% (68) of the discontinued pupils were Black, 40.0% (48) were Non-Minority, and 3.3% (4) were Other Minority (see Table 7). These figures are representative of all pupils served. Of the 120 discontinued pupils, 79.2% (95) were on free lunch, 8.3% (10) were on reduced lunch, and 12.5% (15) were not on subsidized lunch. When comparing these figures to all pupils served, the numbers are representative of all pupils served.

Table 6

Percent and Number of Reading Recovery Pupils Discontinued by Gender 1990-91

Gender	%	(N)
Boys	50.8	(61)
Girls	49.2	(59)
Total	100.0	(120)

Table 7

Percent and Number of Reading Recovery Pupils Discontinued by Race 1990-91

Race	%	(N)
Non-Minority	40.0	(48)
Black	56.7	(68)
Other Minority[a]	3.3	(4)
Total	100.0	(120)

[a]Includes Spanish Surname, Asian American, and American Indian

Table 8

Percent and Number of Reading Recovery Pupils Discontinued by Subsidized Lunch Status 1990-91

Subsidized Lunch Status	%	(N)
Free	79.2	(95)
Reduced	8.3	(10)
Paying	12.5	(15)
Total	100.0	(120)

Note. Based on June 1991 data

Question 2 What were the performance levels of Reading Recovery pupils on a standardized test of reading?

Analysis 2.1 Number and percent of pupils reaching the 50%ile in Total Reading on the MAT6.

Analysis 2.2 Number and percent of pupils reaching the 37%ile in Total Reading on the MAT6.

Analysis 2.3 Number and percent of pupils reaching the average NCE for the district in Total Reading on the MAT6. (Analysis will be based on available data. Availability of data will come from schools involved in other programs requiring total school testing.)

Analysis 2.4 Number and percent of pupils who have shown a gain of seven NCE points between pretest and posttest in Total Reading on the MAT6.

Analysis 2.5 Analysis of central tendency and distribution of NCE scores on the pretest and posttest of Total Reading on the MAT6.

MAT6 posttest scores from April 1991 were analyzed for the 139 pupils in the evaluation sample and for certain subgroups within the evaluation sample (see Tables 9 and 11). Analyses of pre- and posttest scores were also conducted to determine the Normal Curve Equivalent (NCE) change that took place from pretest to posttest for pupils in the evaluation sample.

Table 9 presents data showing the number and percent of pupils reaching the 37%ile and 50%ile in Total Reading on the MAT6 posttest. Of the 139 pupils in the evaluation sample, 37.4% (52) reached the 37%ile on the posttest, with 23.7% (33) reaching the 50%ile on the posttest. The remaining 87 pupils (62.6%) in the evaluation sample had posttest scores below the 37%ile, indicating that they were still eligible for Chapter 1 program service. Those pupils who were successfully discontinued from the program reached the 37%ile and 50%ile on the posttest at much higher percentages than did those pupils who were not discontinued and received 60 or more lessons. Of the 108 discontinued pupils, 46.3% (50) reached the 37%ile and 30.6% (33) reached the 50%ile, but only 6.5% (2) of the 31 not discontinued pupils who received 60 or more lessons reached the 37%ile. None of the 31 pupils reached the 50%ile on the posttest.

When comparing the percents of pupils reaching the 37%ile and 50%ile in Total Reading on the posttest over the five year period from 1987 to 1991, the data reported in Table 10 show that from the 1989-90 to 1990-91 school year there was an increase in the percent of pupils reaching the 37%ile (22.8% to 37.4%) and an increase in the percent of pupils reaching the 50%ile (15.2% to 23.7%). The data also indicate that when the posttest was changed from the CTBS, 1981, to the MAT6, 1985, beginning with the 1988-89 school year, posttest scores dropped. The decrease, in part, resulted from the MAT6, 1985, being considered to be a more difficult test than the CTBS, 1981. Research indicates that tests normed in 1985 would be more difficult than those normed in 1981 because reading scores nationwide rose over the period from 1981-1985. Another possible explanation for the dramatic decrease in 1988-89 may be attributed to the inappropriateness of the pretest level of the MAT6, 1985, administered at that time. The MAT6 results may not have reflected true pupil performance during 1988-89. The pretest level was found to be too difficult for low-achieving pupils, while the posttest level was found to be too easy for the

Table 9
Percent and Number of Evaluation Sample Pupils
Reaching 37%ile and 50%ile on MAT6 Posttest for
Total Reading by Pupil Category
1990-91

Pupil Category	N	Total Reading 37%ile %	Total Reading 37%ile (N)	Total Reading 50%ile %	Total Reading 50%ile (N)
Discontinued	108	46.3	50	30.6	33
Not Discontinued and 60 or More Lessons	31	6.5	2	0.0	0
Total Sample	139	37.4	52	23.7	33

Table 10
Percent and Number of Evaluation Sample Pupils
Reaching 37%ile and 50%ile on
Total Reading Posttest by Year
1987-91

School Year	N	Posttest	Total Reading 37%ile %	Total Reading 37%ile (N)	Total Reading 50%ile %	Total Reading 50%ile (N)
1986-87	189	CTBS,1981	38.6	73	18.5	35
1987-88	253	CTBS,1981	33.2	84	15.0	38
1988-89	104	MAT6,1985	22.1	23	11.5	12
1989-90	184	MAT6,1985	22.8	42	15.2	28
1990-91	139	MAT6,1985	37.4	52	23.7	33

average and above-average pupils. More appropriate pretest and posttest levels were administered in 1989-90 and thereafter. The increase in the percent of pupils reaching the 37%ile and 50%ile in Total Reading from 1989-90 to 1990-91 can, in part, be attributed to the selection process for pupils into the program. Prior to 1990-91, pupils scoring the lowest on the selection test were served by the Reading Recovery program. But in 1990-91, with the establishment of the Early Literacy program, the lowest pupils were served in Early Literacy and not Reading Recovery. Also, many pupils entered the Reading Recovery program after having been served in the Early Literacy program, resulting in pupils entering the Reading Recovery program with higher reading skills and strategies.

The data derived from Analysis 2.3, relating to the number and percent of pupils reaching the average NCE for the district in Total Reading on the MAT6, show that of the 139 pupils in the evaluation sample, 43 (30.9%) reached the average NCE (45.6 NCEs) for the district in Total Reading. Of the 108 pupils in the evaluation sample who were successfully discontinued, 42 (38.9%) reached the district average, while only one (3.2%) of the evaluation sample pupils who were not discontinued and received 60 or more lessons (31) reached the district average NCE for the posttest.

Table 11 displays data concerning the number and percent of evaluation sample pupils achieving an NCE gain of 7.0 or more from pretest to posttest on the MAT6. For all 139 pupils in the evaluation sample, the average pretest-posttest gain was 16.8 NCEs, with 91 (65.5%) of the evaluation sample pupils gaining 7.0 or more NCEs. When looking at the 108 discontinued pupils in the sample, the average pretest-posttest gain was 19.9 NCEs, with 74 (68.5%) pupils having an NCE gain of 7.0 points or more. Those sample pupils who were not discontinued and had 60 or more lessons had a much lower pretest-posttest gain than did the discontinued pupils. The 31 not discontinued pupils had an average gain of 6.1 NCEs, with 17 (54.8%) having an NCE gain equal to or greater than 7.0.

For Analysis 2.5 the Kolmogorov-Smirnov Goodness of Fit Test was run to determine whether or not the distributions of the Total Reading pretest, posttest, and pretest-posttest difference scores were relatively normal. Results indicated that the three distributions of 139 scores did not differ significantly from a normal distribution (for the pretest K-S z = 1.19, p = 0.12; for the posttest K-S z = 1.28, p = 0.08; and for the pretest-posttest distribution, K-S z = 0.96, p = 0.31). The means and standard deviations for these distributions are shown in Table 11.

Table 11
Percent and Number of Evaluation Sample Pupils Achieving
Normal Curve Equivalent (NCE) Gain $\geq$ 7.0 on MAT6 by Pupil Category
1990-91

Pupil Category	N	Pretest Mean NCE	Pretest SD	Posttest Mean NCE	Posttest SD	Pretest-Posttest Change Mean NCE	Pretest-Posttest Change SD	Change $\geq$ 7 NCEs %	Change $\geq$ 7 NCEs (N)
Discontinued	108	24.6	13.9	44.5	20.6	19.9	23.6	68.5	74
Not Discontinued and 60 or More Lessons	31	17.2	12.8	23.3	12.9	6.1	16.8	54.8	17
Total Sample	139	22.9	14.0	39.8	21.1	16.8	23.0	65.5	91

Question 3 What were the teacher ratings in 1990-91 of pupils who were served by Reading Recovery during the 1989-90 school year? What were the attitudes of these teachers regarding the Reading Recovery program?

Analysis 3.1 Frequency counts, percents, and content analysis of the survey of teachers who had pupils in 1990-91 who were served by Reading Recovery in the 1989-90 treatment group (Classroom Teacher Survey).

In May 1991 surveys were mailed to classroom teachers who had pupils in 1990-91 who were in the Reading Recovery treatment group in the 1989-90 school year. The purposes of the Classroom Teacher Survey (see pp. 54-57, Appendix D) were to obtain teacher ratings and related information with regard to the reading performance of pupils during 1990-91 who received the Reading Recovery program treatment during the previous school year, to determine teacher agreement with selected statements about the program, and to collect classroom teacher comments about the Reading Recovery program in general.

Each survey sent to classroom teachers contained the name(s) of one or more pupils in their homeroom who were in the 1989-90 Reading Recovery treatment group and who were still enrolled in the Columbus Public Schools at the time of the mailing. Of the 218 pupils in the 1989-90 treatment group, 192 were still enrolled in May 1991. These 192 pupils were distributed in 114 teachers' homerooms throughout the district. Surveys were sent to these 114 teachers, with a return rate of 62.3% (71 surveys returned out of 114 mailed). The 71 returned surveys contained the names and student numbers of 121 (63.0%) of the 192 pupils for whom ratings were sought. Of the 121 pupils, 25 pupils were excluded from the analysis due to one or more of the following reasons: the pupil was no longer in the teacher's homeroom; the pupil was in special education; the teacher felt the pupil had not been in the homeroom long enough for him or her to provide ratings; and the pupil's grade level was missing from the survey. The final analysis was conducted for the remaining 96 pupils. This number was 50.0% of the 192 pupils remaining in the district from the 1989-90 treatment group.

Classroom Teacher Survey responses are summarized in Tables 12 to 16. Of the 96 pupils in the 1989-90 Reading Recovery treatment group who were included in the final analysis, 14.6% (14) were retained in grade 1 and 85.4% (82) were in grade 2 in 1990-91. Over two-thirds of the group, 70.8% (68) were discontinued in 1989-90 and less than one-third, 29.2% (28) were not discontinued. All of the 68 discontinued pupils were in grade 2. Of the 28 not discontinued pupils, 50.0% (14) were in grade 2 and 50.0% (14) were in grade 1.

Items 22, 25, and 26 of the Classroom Teacher Survey provided demographic data about the 71 teachers who returned surveys. Of the 71 respondents, 76.1% (54) responded that they were presently teaching in a school where Reading Recovery served pupils, 19.7% (14) were teaching first grade, 63.4% (45) were teaching second grade, and 12.7% (9) responded that they taught split grade classes or other types of classes (three people did not respond to Item 25). All of the 71 respondents taught in regular classrooms, with none teaching Special Education.

Table 12 includes a distribution of pupil ratings for Items 3-13, in which classroom teachers rated each pupil from very successful (5) to very unsuccessful (1) for each item. Item mean scores are also included. A mean score of 3.50 or greater indicates successful performance and a mean score at or below 2.50 indicates unsuccessful performance. The category in-between

Table 12

Frequency and Mean Classroom Teacher Survey Ratings for Items 3-13
for 1990-91 Pupils Who Were in the 1989-90 Reading Recovery Treatment Group
by 1990-91 Grade Level

Grade 1 Item	Mean	Response Category: Very Successful 5 %	(N)	Successful 4 %	(N)	In-Between 3 %	(N)	Unsuccessful 2 %	(N)	Very Unsuccessful 1 %	(N)	Total (N)
3. Reads and understands basal reading stories	3.00	7.1	(1)	28.6	(4)	21.4	(3)	42.9	(6)	0.0	(0)	(14)
4. Reads and understands supplemental reading materials used for instruction	3.14	14.3	(2)	14.3	(2)	42.9	(6)	28.6	(4)	0.0	(0)	(14)
5. Reads library books	3.07	7.1	(1)	28.6	(4)	35.7	(5)	21.4	(3)	7.1	(1)	(14)
6. Understands assignments	3.43	14.3	(2)	28.6	(4)	42.9	(6)	14.3	(2)	0.0	(0)	(14)
7. Works independently	3.29	7.1	(1)	50.0	(7)	14.3	(2)	21.4	(3)	7.1	(1)	(14)
8. Finishes seatwork	3.36	14.3	(2)	28.6	(4)	42.9	(6)	7.1	(1)	7.1	(1)	(14)
9. Practices self control	3.50	28.6	(4)	28.6	(4)	21.4	(3)	7.1	(1)	14.3	(2)	(14)
10. Writes own stories	3.29	7.1	(1)	35.7	(5)	42.9	(6)	7.1	(1)	7.1	(1)	(14)
11. Makes progress in reading group	3.14	14.3	(2)	28.6	(4)	21.4	(3)	28.6	(4)	7.1	(1)	(14)
12. Usually knows how to figure out new words	2.93	14.3	(2)	21.4	(3)	21.4	(3)	28.6	(4)	14.3	(2)	(14)
13. Attends class regularly	3.93	42.9	(6)	28.6	(4)	14.3	(2)	7.1	(1)	7.1	(1)	(14)

(table continues)

Table 12 (continued)

Frequency and Mean Classroom Teacher Survey Ratings for Items 3-13
for 1990-91 Pupils Who Were in the 1989-90 Reading Recovery Treatment Group
by 1990-91 Grade Level

Grade 2 Item	Mean	Response Category: Very Successful 5 %	(N)	Successful 4 %	(N)	In-Between 3 %	(N)	Unsuccessful 2 %	(N)	Very Unsuccessful 1 %	(N)	Total (N)
3. Reads and understands basal reading stories	3.39	10.3	(8)	35.9	(28)	37.2	(29)	15.4	(12)	1.3	(1)	(78)
4. Reads and understands supplemental reading materials used for instruction	3.31	12.5	(10)	28.7	(23)	40.0	(32)	15.0	(12)	3.7	(3)	(80)
5. Reads library books	3.50	16.2	(13)	37.5	(30)	31.3	(25)	10.0	(8)	5.0	(4)	(80)
6. Understands assignments	3.22	11.1	(9)	34.6	(28)	25.9	(21)	22.2	(18)	6.2	(5)	(81)
7. Works independently	3.11	14.8	(12)	23.5	(19)	29.6	(24)	22.2	(18)	9.9	(8)	(81)
8. Finishes seatwork	3.26	14.8	(12)	34.6	(28)	23.5	(19)	16.0	(13)	11.1	(9)	(81)
9. Practices self control	3.44	24.7	(20)	28.4	(23)	21.0	(17)	18.5	(15)	7.4	(6)	(81)
10. Writes own stories	3.31	16.0	(13)	29.6	(24)	28.4	(23)	21.0	(17)	4.9	(4)	(81)
11. Makes progress in reading group	3.40	11.1	(9)	43.2	(35)	24.7	(20)	16.0	(13)	4.9	(4)	(81)
12. Usually knows how to figure out new words	3.10	8.9	(7)	26.6	(21)	36.7	(29)	21.5	(17)	6.3	(5)	(79)
13. Attends class regularly	4.22	42.0	(34)	42.0	(34)	13.6	(11)	1.2	(1)	1.2	(1)	(81)

EVALSRVCS/P501/RPTFCRR91
12/13/91

ranged between 3.50 and 2.50. In addition to item means, the percentages of positive ratings (very successful and successful) and negative ratings (unsuccessful and very unsuccessful) were considered. Table 12 reports ratings by grade level, separating pupils who were retained in grade 1 from pupils who progressed to grade 2, taking into account the different teacher expectations for pupil performance for these two groups.

Table 13 includes a distribution of pupil ratings for Items 3-13 by 1989-90 pupil category. That is, ratings for pupils who were discontinued during 1989-90 are reported separately from ratings for pupils who were not discontinued but received 60 or more lessons. Items in Table 13, like Table 12, include a rating for each item from very successful (5) to very unsuccessful (1). Mean scores are also included and treated the same as with Table 12.

Four items about reading were of particular interest: reads and understands basal reading stories (Item 3); reads and understands supplemental reading materials used for instruction (Item 4); makes progress in reading group (Item 11); and usually knows how to figure out new words (Item 12).

Results for Items 3-13 in Grades 1 and 2 (see Table 12). Overall, on Items 3-13, grade 1 pupils received 2 successful (positive) mean rating, 9 in-between ratings, and no unsuccessful (negative) ratings. Grade 2 pupils also received 2 successful mean rating, 9 in-between ratings, and no unsuccessful ratings. Items 3, 4, 11, and 12 of the survey dealt directly with reading instruction. Ratings for both grades 1 and 2 for these four items were all in the in-between range, but grade 2 pupils were consistently rated higher than grade 1 pupils. For grade 1, Item 4 about reading and understanding supplemental reading material and Item 11 dealing with making progress in reading group each had the highest mean rating (3.14) of the four reading items. Item 4 was rated successful (5 or 4) by 28.6% of respondents and unsuccessful (2 or 1) by 28.6% of respondents and Item 11 was rated successful by 42.9% of respondents and unsuccessful by 35.7% of respondents. Usually knowing how to figure out new words (Item 12) had the lowest mean rating (2.93) of the four reading items, with 35.7% rating it successful and 42.9% unsuccessful. For grade 2, Item 11 also had the highest mean rating (3.40), with a 54.3% successful rating and 20.9% unsuccessful. Item 12 (knowing how to figure out new words) was the lowest rated item of the four for grade 2, having a mean rating of 3.10, with a 35.4% successful rating and 27.8% unsuccessful. For Items 3-13, pupils in both grade 1 and 2 received their highest mean rating for class attendance (Item 13), grade 1 with a mean rating of 3.93 and grade 2 with a mean rating of 4.22. The lowest rated item for grade 1 was Item 12 (2.93). For grade 2, the lowest rated items were Item 12 (3.10) and Item 7 (3.11), which related to working independently.

Results for Items 3-13 by Pupil Category (see Table 13). Overall, on Items 3-13, discontinued pupils received 4 successful (positive) mean ratings, 7 in-between ratings, and no unsuccessful (negative) ratings. Not discontinued pupils received 1 successful rating, 10 in-between ratings, and no unsuccessful ratings. For all 11 items, discontinued pupils received higher ratings when compared to not discontinued pupils. Of the four reading-related items (3, 4, 11, and 12), the item about making progress in reading group (Item 11) rated the highest for discontinued pupils (3.57), with 61.2% successful and 16.4% unsuccessful. For not discontinued pupils, two items (Items 3 and 4) were rated the highest (2.96). Item 3, dealing with reading and understanding basal reading stories, had 30.8% successful and 38.4% unsuccessful and Item 4, about reading and understanding supplemental reading materials had 22.2% successful and 33.3% unsuccessful. The highest rated of Items 3-13 for both discontinued

Table 13

Frequency and Mean Classroom Teacher Survey Ratings for Items 3-13
for 1990-91 Pupils Who Were in the 1989-90 Reading Recovery Treatment Group
by Pupil Category

Discontinued Pupils Item	Mean	Response Category Very Successful 5 %	(N)	Successful 4 %	(N)	In-Between 3 %	(N)	Unsuccessful 2 %	(N)	Very Unsuccessful 1 %	(N)	Total (N)
3. Reads and understands basal reading stories	3.47	10.6	(7)	39.4	(26)	36.4	(24)	13.6	(9)	0.0	(0)	(66)
4. Reads and understands supplemental reading materials used for instruction	3.42	13.4	(9)	32.8	(22)	38.8	(26)	11.9	(8)	3.0	(2)	(67)
5. Reads library books	3.66	19.4	(13)	41.8	(28)	26.9	(18)	9.0	(6)	3.0	(2)	(67)
6. Understands assignments	3.34	11.9	(8)	38.8	(26)	23.9	(16)	22.4	(15)	3.0	(2)	(67)
7. Works independently	3.24	16.4	(11)	25.4	(17)	29.9	(20)	22.4	(15)	6.0	(4)	(67)
8. Finishes seatwork	3.39	16.4	(11)	37.3	(25)	22.4	(15)	16.4	(11)	7.5	(5)	(67)
9. Practices self control	3.57	26.9	(18)	31.3	(21)	17.9	(12)	19.4	(13)	4.5	(3)	(67)
10. Writes own stories	3.42	17.9	(12)	32.8	(22)	26.9	(18)	17.9	(12)	4.5	(3)	(67)
11. Makes progress in reading group	3.57	13.4	(9)	47.8	(32)	22.4	(15)	14.9	(10)	1.5	(1)	(67)
12. Usually knows how to figure out new words	3.25	10.4	(7)	31.3	(21)	34.3	(23)	20.9	(14)	3.0	(2)	(67)
13. Attends class regularly	4.27	44.8	(30)	38.8	(26)	14.9	(10)	1.5	(1)	0.0	(0)	(67)

(table continues)

Table 13 (continued)

Frequency and Mean Classroom Teacher Survey Ratings for Items 3-13
for 1990-91 Pupils Who Were in the 1989-90 Reading Recovery Treatment Group
by Pupil Category

Not Discontinued Pupils Item	Mean	Response Category Very Successful 5 %	(N)	Successful 4 %	(N)	In-Between 3 %	(N)	Unsuccessful 2 %	(N)	Very Unsuccessful 1 %	(N)	Total (N)
3. Reads and understands basal reading stories	2.96	7.7	(2)	23.1	(6)	30.8	(8)	34.6	(9)	3.8	(1)	(26)
4. Reads and understands supplemental reading materials used for instruction	2.96	11.1	(3)	11.1	(3)	44.4	(12)	29.6	(8)	3.7	(1)	(27)
5. Reads library books	2.89	3.7	(1)	22.2	(6)	44.4	(12)	18.5	(5)	11.1	(3)	(27)
6. Understands assignments	3.04	10.7	(3)	21.4	(6)	39.3	(11)	17.9	(5)	10.7	(3)	(28)
7. Works independently	2.89	7.1	(2)	32.1	(9)	21.4	(6)	21.4	(6)	17.9	(5)	(28)
8. Finishes seatwork	3.00	10.7	(3)	25.0	(7)	35.7	(10)	10.7	(3)	17.9	(5)	(28)
9. Practices self control	3.18	21.4	(6)	21.4	(6)	28.6	(8)	10.7	(3)	17.9	(5)	(28)
10. Writes own stories	3.04	7.1	(2)	25.0	(7)	39.3	(11)	21.4	(6)	7.1	(2)	(28)
11. Makes progress in reading group	2.86	7.1	(2)	25.0	(7)	28.6	(8)	25.0	(7)	14.3	(4)	(28)
12. Usually knows how to figure out new words	2.62	7.7	(2)	11.5	(3)	34.6	(9)	26.9	(7)	19.2	(5)	(26)
13. Attends class regularly	3.96	35.7	(10)	42.9	(12)	10.7	(3)	3.6	(1)	7.1	(2)	(28)

and not discontinued pupils was Item 13 relating to regular class attendance, discontinued pupils with a mean rating of 4.27 and not discontinued pupils with a mean rating of 3.96. The lowest rated of the 11 items for discontinued pupils were Item 7 (3.24), relating to working independently and Item 12 (3.25), dealing with knowing how to figure out new words. For not discontinued pupils, the lowest rated item was Item 12, with a 2.62 mean rating.

Tables 14 and 15 show distributions of pupil ratings for the three items about the achievement of passing scores on basal tests (Items 14-16) and also ratings on retention of pupils (Item 19). The ratings are reported by grade level in Table 14 and by pupil category in Table 15. By grade level, grade 2 pupils were rated higher than grade 1 pupils in achieving passing comprehension test scores (68.6% to 54.5%), in achieving passing vocabulary test scores (67.6% to 55.6%) and in achieving passing decoding test scores (50.8% to 33.3%). By pupil category, discontinued pupils were rated higher than not discontinued pupils on achieving passing comprehension test scores (72.6% to 47.4%). Discontinued pupils also rated higher for vocabulary (77.4% to 33.3%) and for decoding (59.3% to 21.7%). For Item 19, 13.8% (11) of 80 grade 2 pupils were to be retained and none of grade 1 pupils would be retained because district practice limits retention in grade 1 to one year. (Pupils in grade 1 had been retained at the end of the 1989-90 school year.) By pupil category, 11.9% (8) of the 67 discontinued pupils in the treatment group were to be retained, compared with 11.1% (3) of the 27 not discontinued pupils.

Item 17 of the survey dealt with the reading group status of the pupils who were rated by teachers. Teachers rated pupils as being in either a high, middle, or low reading group. For grade 1, 16.7% (2 pupils) were in the high group, 33.3% (4 pupils) were in the middle group, and 50.0% (6) were in the low group. In grade 2, percentages were lower for high and low groups but higher for the middle reading group: 7.4% (5 pupils) for high, 48.5% (33 pupils) for middle, and 44.1% (30 pupils) for low. By pupil category, there was a major difference in placement in reading groups when comparing discontinued pupils with not discontinued pupils. For discontinued pupils, placements included 9.1% (5 pupils) high, 56.4% (31 pupils) middle, and 34.5% (19 pupils) low. Not discontinued pupil placement included 8.0% (2) high, 24.0% (6) middle, and 68.0% (17) low.

Data for Item 18, which asked respondents to indicate the letter grade the pupil received in reading for the last grading period is included in this analysis, but provides little information about pupil achievement in reading. During 1990-91, a new reading series was adopted and implemented in the elementary grades. Pupil achievement in reading, using the new series, was not evaluated on a scale of "A" to "F," but on a successful or unsuccessful basis. Because the survey was not updated to reflect this change, 72 of 95 pupils (75.8%) were rated "Not Applicable." The remaining 23 pupils were rated from "A" to "F," with 11 (47.8%) rated "A" to "C," and 12 (52.2%) rated "D" or "F."

For Item 20, classroom teachers reported that none of the pupils who were rated was a "non-English" speaking student (ESL). Item 21 dealt with pupil qualification for Special Education programs. By grade level, none of grade 1 pupils, compared to 9.8% (8) of grade 2 pupils, qualified for a Special Education program. By pupil category, 7.4% (5) of the discontinued pupils qualified for a Special Education program, and 11.1% (3) for not discontinued pupils.

Table 16 shows a distribution of responses to Items 23 and 24 of the Classroom Teacher Survey. Only those teachers who responded positively to Item 22 (whether Reading Recovery served their school during 1990-91) were to

Table 14

Classroom Teacher Survey Ratings for Items 14, 15, 16, and 19
for 1989-90 Reading Recovery Treatment Group Pupils
by 1990-91 Grade Level

Item	Grade									
	Grade 1					Grade 2				
	Yes		No		Total	Yes		No		Total
	%	(N)	%	(N)	(N)	%	(N)	%	(N)	(N)
Achieves suggested passing score on basal tests in the area of:										
14. Comprehension	54.5	(6)	45.5	(5)	(11)	68.6	(48)	31.4	(22)	(70)
15. Vocabulary	55.6	(5)	44.4	(4)	(9)	67.6	(50)	32.4	(24)	(74)
16. Decoding	33.3	(4)	66.7	(8)	(12)	50.8	(33)	49.2	(32)	(65)
19. Will be retained at the end of this school year	0.0	(0)	100.0	(14)	(14)	13.8	(11)	86.2	(69)	(80)

Note. Responses of not sure were excluded from the analysis.

Table 15

Classroom Teacher Survey Ratings for Items 14, 15, 16, and 19
for 1989-90 Reading Recovery Treatment Group Pupils
by Pupil Category

Item	Pupil Category									
	Discontinued					Not Discontinued				
	Yes		No		Total	Yes		No		Total
	%	(N)	%	(N)	(N)	%	(N)	%	(N)	(N)
Achieves suggested passing score on basal tests in the area of:										
14. Comprehension	72.6	(45)	27.4	(17)	(62)	47.4	(9)	52.6	(10)	(19)
15. Vocabulary	77.4	(48)	22.6	(14)	(62)	33.3	(7)	66.7	(14)	(21)
16. Decoding	59.3	(32)	40.7	(22)	(54)	21.7	(5)	78.3	(18)	(23)
19. Will be retained at the end of this school year	11.9	(8)	88.1	(59)	(67)	11.1	(3)	88.9	(24)	(27)

Note. Responses of not sure were excluded from the analysis.

Table 16

Frequency and Mean Classroom Teacher Survey Responses for Items 23-24
from Teachers in Schools Served by Reading Recovery
1990-91

Item	Mean	Response Category: Strongly Agree 5 %	Strongly Agree 5 (N)	Agree 4 %	Agree 4 (N)	Undecided 3 %	Undecided 3 (N)	Disagree 2 %	Disagree 2 (N)	Strongly Disagree 1 %	Strongly Disagree 1 (N)	Total (N)
23. The Reading Recovery program is of value to pupils in my school.	4.37	57.7	(30)	23.1	(12)	17.3	(9)	1.9	(1)	0.0	(0)	(52)
24. Compared to other ways that money could be spent for compensatory reading programs in my school, I support the funding of the Reading Recovery program.	4.08	49.1	(26)	26.4	(14)	15.1	(8)	1.9	(1)	7.5	(4)	(53)

Note. Responses of Don't Know were excluded from the analysis.

respond to Items 23 and 24. Item 23 questioned the value of the Reading Recovery program for pupils. On a 5-point scale [Strongly Agree (5) to Strongly Disagree (1)], Item 23 received a 4.37 mean score, with 80.8% (42 respondents) agreeing that the program was of value to pupils (those responding Strongly Agree and Agree). Item 24 questioned the funding for the Reading Recovery program. The mean score for the item was 4.08 (on the 5-point scale). Forty respondents (75.5%) supported (Strongly Agree and Agree) the funding of the Reading Recovery program compared to other ways that money could be spent for compensatory reading programs in their schools.

Item 27 provided space for teachers to explain one or more of their answers or to comment on the Reading Recovery program in general. Thirty-three of the 71 (46.5%) returned surveys contained written comments (see pp. 59-61, Appendix E). Comments were evaluated as being positive (supportive of the program), neutral (neither supportive nor non-supportive), or negative (non-supportive of the program). Of the 33 comments, 51.5% (17) were judged to be positive, 9.1% (3) negative, and 39.4% (13) neutral. Typical of the positive comments, one respondent wrote, "I believe in the Reading Recovery program because it gives individual attention to children who truly need it at the very beginning of their reading acquisition." Another stated, "The program has done wonders for a couple of my children that had little or no skills in first grade." But negatively, one respondent wrote, "It is a band-aide on a much more serious problem. Money could be better spent elsewhere. The few successes are not worth the price or time." Neutral comments varied, with responses including: (1) problems with pupils qualifying for special education; (2) specific comments about individual pupils; (3) the need to serve second grade pupils; and (4) the possibility of not having enough knowledge about the program to comment.

Question 4 What were the costs of the Reading Recovery program compared to other compensatory programs?

Analysis 4.1 Costs per pupil of each program.

Table 17 provides data comparing the per pupil cost of compensatory programs serving grade 1 pupils in Columbus Public Schools. In addition to Reading Recovery, these programs include the Early Literacy program (grade 1) and the Instructional Assistant program.

The program cost per FTE ranged from $39,606 per FTE for Reading Recovery to $35,274 per FTE for Early Literacy to $13,921 per FTE for the Instructional Assistant program. Cost per FTE varied due to the salary schedule for Columbus Public School employees, which is dependent on position held, years experience, and educational degree attained.

During 1990-91, Reading Recovery served 297 pupils at a total cost of $792,113 compared to Early Literacy (grade 1) which served 817 pupils at a cost of $535,104 and the Instructional Assistant program which served 1,603 pupils at a total cost of $1,116,881. The per pupil cost of the three grade 1 compensatory education programs were as follows: Reading Recovery, $2,667 per pupil; Early Literacy (grade 1), $655 per pupil; and the Instructional Assistant program, $697 per pupil.

Of the three first grade programs, the Reading Recovery program had the highest percentage of pupils served who met the criteria for the program evaluation sample - 46.8%, followed by the Instructional Assistant program - 45.1%, and the Early Literacy program at 17.6%. The criteria, however, differed among the programs, e.g., Reading Recovery used the number of lessons while Early Literacy (grade 1) and the Instructional Assistant program used attendance.

Table 17

Cost Analysis for First-Grade Public School Pupils in Chapter 1 Reading Recovery, Chapter 1 Early Literacy, and the DPPF First-Grade Instructional Assistant Program 1990-91

Program	Number of FTE Teachers or Assistants	Program Cost[a]		Pupils in Program		Pupils per FTE		Cost per Pupil		Percentage of Pupils Served Who Met Evaluation Sample Criteria
		Total	Per FTE	Served	In Sample	Served	In Sample	Served	In Sample	
Reading Recovery	20.0	$ 792,113	$39,606	297	139	14.9	7.0	$2,667	$5,699	46.8%
Early Literacy (Grade 1)	15.17	$535,104	$35,274	817	144	72.0	12.7	$655	$3,716	17.6%
Instructional Assistant (Grade 1)	80.23	$1,116,881	$13,921	1,603	723	20.0	9.0	$697	$1,545	45.1%

Note. Evaluation sample criteria differed among the programs.
[a] Cost figures include only teacher or aide costs (salaries plus fringe benefits).

Question 5 What were the long-term effects of the Reading Recovery program?

Analysis 5.1 Number and percent of pupils in the 1988-89 and 1989-90 Reading Recovery treatment groups who in 1990-91 attended a school where a compensatory program was available and who were served by a compensatory program.

Analysis 5.2 Number and percent of pupils in the 1989-90 Reading Recovery treatment group scoring at or above the average NCE of the district in Vocabulary, Reading Comprehension, and Total Reading on the CTBS in April 1991.

Analysis 5.3 Number and percent of pupils in the 1988-89 and 1989-90 Reading Recovery treatment groups scoring at or above the 37%ile in Vocabulary, Reading Comprehension, and Total Reading on the CTBS in April 1991.

Analysis 5.4 Number and percent of pupils in the 1988-89 and 1989-90 Reading Recovery treatment groups scoring at or above the 50%ile in Vocabulary, Reading Comprehension, and Total Reading on the CTBS in April 1991.

Analysis 5.5 Number and percent of pupils in the 1988-89, 1989-90, and 1990-91 Reading Recovery treatment groups who followed a normal grade level progression.

Analysis 5.6 Number and percent of pupils in the 1988-89, 1989-90, and 1990-91 Reading Recovery treatment groups who were later identified and served in a special education class.

Analyses 5.1-5.6 were conducted from available follow-up data for pupils who were in the 1988-89, 1989-90, and 1990-91 treatment groups. The original 1988-89 treatment group was comprised of 184 pupils, the 1989-90 treatment group was comprised of 218 pupils, and the 1990-91 treatment group was comprised of 154 pupils. The number of pupils included in the analyses for Question 5 varied due, in part, to pupil mobility, the timing of data collection, and different restrictions inherent in the various analy

Table 18 contains a summary of results for Analysis 5.1, the study of the 1988-89 and 1989-90 Reading Recovery treatment group pupils who were served by a compensatory program in 1990-91. The analysis included four compensatory programs: the Chapter 1 Reading program , the Early Literacy program, the Reading Recovery program, and the Instructional Assistant program. Pupils who were on a waiting list to be served by a compensatory education program were not included in Analysis 5.1. The criterion scores used to establish eligibility and priority for program service varied from program to program and school to school.

Of the 184 pupils in the 1988-89 Reading Recovery treatment group, 162 pupils were in a school and at a grade level where a compensatory program was in operation during the 1990-91 school year (see Table 18). Of these 162 pupils, 48.8% (79) were served in a compensatory program. By grade level, the one first grade pupil was not served in a compensatory program (pupil was served in a special education program), 63.6% (35) of the 55 pupils in grade 2 were served, compared to 41.5% (44) of the 106 pupils in grade 3. For the 1988-89 treatment group, the percent of discontinued and not discontinued

Table 18

Percent and Number of Pupils in the 1988-89 and 1989-90 Reading Recovery Treatment Groups by Compensatory Education Program Status in 1990-91

1988-89 Treatment Group		Compensatory Education Program Status					
		Not In Comp. Ed.		In Comp. Ed.		Total	
Grade in 1990-91	Pupil Category	%	(N)	%	(N)	%	(N)
1	Discontinued	0.0	(0)	0.0	(0)	0.0	(0)
	Not Discontinued	100.0	(1)	0.0	(0)	100.0	(1)
	Subtotal	100.0	(1)	0.0	(0)	100.0	(1)
2	Discontinued	30.0	(3)	70.0	(7)	100.0	(10)
	Not Discontinued	37.8	(17)	62.2	(28)	100.0	(45)
	Subtotal	36.4	(20)	63.6	(35)	100.0	(55)
3	Discontinued	62.0	(49)	38.0	(30)	100.0	(79)
	Not Discontinued	48.1	(13)	51.9	(14)	100.0	(27)
	Subtotal	58.5	(62)	41.5	(44)	100.0	(106)
	Total	51.2	(83)	48.8	(79)	100.0	(162)

(table continues)

Table 18 (continued)

Percent and Number of Pupils in the 1988-89 and 1989-90 Reading Recovery Treatment Groups by Compensatory Education Program Status in 1990-91

1989-90 Treatment Group		Compensatory Education Program Status					
		Not In Comp. Ed.		In Comp. Ed.		Total	
Grade in 1990-91	Pupil Category	%	(N)	%	(N)	%	(N)
1	Discontinued	0.0	(0)	0.0	(0)	0.0	(0)
	Not Discontinued	60.7	(17)	39.3	(11)	100.0	(28)
	Subtotal	60.7	(17)	39.3	(11)	100.0	(28)
2	Discontinued	58.6	(82)	41.4	(58)	100.0	(140)
	Not Discontinued	25.6	(10)	74.4	(29)	100.0	(39)
	Subtotal	51.4	(92)	48.6	(87)	100.0	(179)
	Total	52.7	(109)	47.3	(98)	100.0	(207)

Note. Pupils served from September 24 through the end of the school year were included in the "In Comp. Ed. Program" category. Compensatory programs included the Chapter 1 Reading program, the Early Literacy program, the Reading Recovery program, and the Instructional Assistant program. Pupils on a waiting list to be served were included in the "Not in Comp. Ed." Category. Table excludes pupils in school/grade combinations where compensatory education programs were not offered.

pupils served by a compensatory program varied, not including the grade 1 pupil who was not discontinued and not served. In grade 2, 70.0% (7) of the 10 discontinued pupils were served in a compensatory program compared to 62.2% (28) of the 45 not discontinued pupils. In grade 3, 38.0% (30) of the 79 discontinued pupils were served in a compensatory program compared to 51.9% (14) of the 27 not discontinued pupils. Overall, 41.6% (37) of the 89 discontinued pupils in grades 2 and 3 were served in a compensatory program in 1990-91, two years after they completed the Reading Recovery program.

Of the 218 pupils in the 1989-90 Reading Recovery treatment group, 207 pupils were in a school and at a grade level where a compensatory program was in operation during the 1990-91 school year (see Table 18). Of these 207 pupils, 47.3% (98) were served in a compensatory education program. By grade level, 39.3% (11) of the 28 pupils in grade 1 were served, compared to 48.6% (87) of the 179 pupils in grade 2. Of the 28 pupils in grade 1, all were not discontinued, with 39.3% (11) being served by a compensatory program. In grade 2, 41.4% (58) of the 140 discontinued pupils were served compared to 74.4% (29) of the 39 not discontinued pupils. Because no grade 1 pupils were discontinued, the overall percent of pupils who were discontinued and served by a compensatory program for the 1989-90 treatment group is the same as for grade 2 stated above.

Only pupils who had a normal grade-level progression at posttest time were included in analyses 5.2, 5.3, and 5.4. Valid CTBS Vocabulary, Reading Comprehension, and Total Reading posttest scores from April 1991 were available for 94 of the 184 pupils who were in the 1988-89 treatment group, of whom, 75 were discontinued and 19 were not discontinued. Of the 218 pupils in the 1989-90 treatment group, valid CTBS Vocabulary, Reading Comprehension, and Total Reading posttest scores were available for 159 pupils, 125 discontinued and 34 not discontinued. Only pupils in the 1989-90 treatment group were included in Analysis 5.2

For Analysis 5.2 the April 1991 CTBS Vocabulary, Reading Comprehension, and Total Reading NCE scores for pupils in the 1989-90 Reading Recovery treatment group were compared to the district average NCE scores for April 1991. The district average NCE score on the Vocabulary posttest was 47. Of the 159 treatment group pupils with valid CTBS Vocabulary posttest scores, 27 (17.0%) reached the district average NCE score. By pupil category, 20.0% (25) of the 125 discontinued pupils compared to 5.9% (2) of the 34 not discontinued pupils reached the district average NCE score. For the Reading Comprehension posttest, the district average NCE score was 48. Of the 159 treatment group pupils with valid posttest scores in Reading Comprehension, 23.9% (38) reached the district average NCE score. Of the 125 discontinued pupils, 36 (28.8%) reached the district average compared to 5.9% (2) of the 34 not discontinued pupils. On the Total Reading posttest the district average NCE score was 47. Of the 159 treatment group pupils with valid Total Reading posttest scores, 20.8% (33) reached the district average NCE score. By pupil category, 24.0% (30) of the 125 discontinued pupils reached the district average NCE score and 8.8% (3) of the 34 not discontinued reached the district average in Total Reading. Of the 33 pupils who reached the district average in Total Reading, all scored above the 37%ile and therefore would no longer qualify for a Chapter 1 compensatory reading program.

Results of Analyses 5.3 and 5.4 (see Table 19) showed that of the three subtests of the CTBS, Vocabulary, Reading Comprehension, and Total Reading, a greater percentage of pupils scored at or above the specified percentiles in Reading Comprehension than did in Vocabulary and Total Reading. In addition,

Table 19

Percent and Number of Pupils in the 1988-89 and 1989-90 Reading Recovery Treatment Groups Who Reached the 37%ile and the 50%ile on the CTBS Vocabulary, Reading Comprehension, and Total Reading Posttest in April 1991

Treatment Group	Subtest: Vocabulary				Subtest: Reading Comprehension				Subtest: Total Reading			
		37%ile		50%ile		37%ile		50%ile		37%ile		50%ile
	(N)	%	(N)	% (N)	(N)	%	(N)	% (N)	(N)	%	(N)	% (N)
1988-89 Grade 3												
Discontinued	(75)	32.0	(24)	16.0 (12)	(75)	40.0	(30)	25.3 (19)	(75)	40.0	(30)	17.3 (13)
Not Discontinued	(19)	5.3	(1)	5.3 (1)	(19)	5.3	(1)	5.3 (1)	(19)	5.3	(1)	5.3 (1)
Subtotal	(94)	26.6	(25)	13.8 (13)	(94)	33.0	(31)	21.3 (20)	(94)	33.0	(31)	14.9 (14)
1989-90 Grade 2												
Discontinued	(125)	32.0	(40)	16.8 (21)	(125)	37.6	(47)	20.0 (25)	(125)	35.2	(44)	13.6 (17)
Not Discontinued	(34)	11.8	(4)	5.9 (2)	(34)	17.6	(6)	5.9 (2)	(34)	11.8	(4)	8.8 (3)
Subtotal	(159)	27.7	(44)	14.5 (23)	(159)	33.3	(53)	17.0 (27)	(159)	30.2	(48)	12.6 (20)

Note. Only includes pupils who had a normal grade-level progression and for whom valid CTBS scores were available.

the percentage of pupils who scored at or above the specified percentiles in Total Reading increased for treatment group pupils two years after Reading Recovery service (1988-89 treatment group) while the percentage of pupils who scored at or above the specified percentiles in Vocabulary decreased two years after program service. Moreover, greater percentages of discontinued pupils than not discontinued pupils scored at or above the specified percentiles.

Results for the 1988-89 treatment group indicated that in Vocabulary, 26.6% (25) of the 94 treatment group pupils with valid test data scored at or above the 37%ile and 13.8% (13) at or above the 50%ile. By pupil category, one (5.3%) of the 19 not discontinued pupils reached the 37%ile and 50%ile, with 32.0% (24) of the 75 discontinued pupils reaching the 37%ile and 16.0% (12) reaching the 50%ile in Vocabulary. On the Reading Comprehension subtest, 33.0% (31) of the 94 pupils with valid test data scored at or above the 37%ile and 21.3% (20) at or above the 50%ile. By pupil category, 40.0% (30) of the 75 discontinued pupils scored at or above the 37%ile and 25.3% (19) at or above the 50%ile, while one (5.3%) of the 19 not discontinued pupils scored at or above the 37%ile and 50%ile. For Total Reading, 33.0% (31) of the 94 pupils with valid test data scored at or above the 37%ile and 14.9% (14) pupils scored at or above the 50%ile. By pupil category, 40.0% (30) of the 75 discontinued pupils reached the 37%ile and 17.3% (13) scored at or above the 50%ile. One (5.3%) of the 19 not discontinued pupils reached the 37%ile and 50%ile. For the 1989-90 treatment group, results indicate that in Vocabulary, 27.7% (44) of the 159 treatment group pupils with valid test data scored at or above the 37%ile and 14.5% (23) reached the 50%ile. By pupil category, 32.0% (40) of the 125 discontinued pupils reached the 37%ile and 16.8% (21) scored at or above the 50%ile, while 11.8% (4) of the 34 not discontinued pupils reached the 37%ile and 5.9% (2) the 50%ile. On the Reading Comprehension subtest, 33.3% (53) of the 159 treatment group pupils scored at or above the 37%ile and 17.0% (27) reached the 50%ile. By pupil category, 37.6% (47) of the 125 discontinued pupils reached the 37%ile and 20.0% (25) the 50%ile, while 17.6% (6) of the 34 not discontinued pupils scored at or above the 37%ile and 5.9% (2) reached the 50%ile. In Total Reading, 30.2% (48) of the 159 treatment group pupils with valid test data scored at or above the 37%ile and 12.6% (20) reached the 50%ile. By pupil category, 35.2% (44) of the 125 discontinued pupils reached the 37%ile and 13.6% (17) scored at or above the 50%ile, while 11.8% (4) of the 34 not discontinued pupils scored at or above the 37%ile and 8.8% (3) reached the 50%ile.

Table 20 summarizes results for Analysis 5.5, the distributions of pupils in the 1988-89, 1989-90, and 1990-91 Reading Recovery treatment groups who followed a normal grade-level progression. Only pupils who were enrolled in the Columbus Public Schools during the month of November in all of their follow-up years (1989, 1990, and/or 1991) were included in the analysis. The numbers of pupils included from the three treatment groups were: 140 pupils (76.1%) from the 1988-89 treatment group, 184 pupils (84.4%) from the 1989-90 treatment group, and 145 pupils (94.2%) from the 1990-91 treatment group, for a combined total of 469 pupils (84.4%) from the three treatment groups.

The percentages of pupils who followed a normal grade-level progression were as follows: 60.0% (84) of the 140 pupils from the 1988-89 treatment group followed a normal grade-level progression into the fourth grade; 75.5% (139) of the 184 pupils from the 1989-90 treatment group followed a normal progression into the third grade; and 95.9% (139) of the 145 pupils from the 1990-91 treatment group followed a normal grade-level progression into the second grade in 1991-92. Overall, 77.2% (362) of the 469 pupils in the analysis followed a normal grade-level progression and 22.8% (107) did not.

Table 20

Percent and Number of Pupils in the 1988-89, 1989-90, and 1990-91 Reading Recovery Treatment Groups by Grade-Level Progression Through November 1991

Treatment Group	Grade-Level Progression: Not Normal %	Not Normal (N)	Normal %	Normal (N)	Total %	Total (N)
1988-89						
Discontinued	14.1	(11)	85.9	(67)	100.0	(78)
Not Discontinued	72.6	(45)	27.4	(17)	100.0	(62)
Subtotal	40.0	(56)	60.0	(84)	100.0	(140)
1989-90						
Discontinued	8.3	(10)	91.7	(110)	100.0	(120)
Not Discontinued	54.7	(35)	45.3	(29)	100.0	(64)
Subtotal	24.5	(45)	75.5	(139)	100.0	(184)
1990-91						
Discontinued	0.9	(1)	99.1	(112)	100.0	(113)
Not Discontinued	15.6	(5)	84.4	(27)	100.0	(32)
Subtotal	4.1	(6)	95.9	(139)	100.0	(145)
Total						
Discontinued	7.1	(22)	92.9	(289)	100.0	(311)
Not Discontinued	53.8	(85)	46.2	(73)	100.0	(158)
Subtotal	22.8	(107)	77.2	(362)	100.0	(469)

Note. The 1988-89 treatment group was followed for 3 years (normal progression into grade 4), the 1989-90 treatment group for 2 years (normal progression into grade 3), and the 1990-91 treatment group for 1 year (normal progression into grade 2). Only pupils enrolled in the Columbus Public Schools during November in each of their follow-up years were included in the analysis.

In each of the three treatment groups a greater percentage of discontinued pupils than not discontinued pupils followed the normal progression. For discontinued pupils, the percentages who followed the normal progression ranged from 85.9% for the 1988-89 treatment group pupils to 99.1% for the 1990-91 treatment group pupils. For not discontinued pupils the percentages who followed a normal progression ranged from 27.4% for the 1988-89 treatment group pupils to 84.4% for the 1990-91 treatment group pupils.

Over the three year period 1988-89, 1989-90, 1990-91, data indicated that the percentage of pupils retained in grade 1 had decreased. For 1988-89, data were available for 171 pupils and showed 21.6% (37) of those served in 1988-89 had been retained in grade 1. In 1989-90, 13.7% (28) of the 204 treatment group pupils were retained in grade 1. For 1990-91, 4.1% (6) of the 145 pupils with follow-up data were retained in grade 1, while 13.7% of the 520 pupils in the three groups combined had been retained in grade 1.

Tables 21-23 contain summaries of Analysis 5.6 which followed the special education status of pupils from the 1988-89, 1989-90, and 1990-91 Reading Recovery treatment groups through November 1991. The analysis included four types of special education programs: communication disorder, developmental handicap, learning disability, and severe behavior handicap (see footnote, Table 21). The percentages of pupils from the treatment groups who were served in special education were: for the 1988-89 treatment group, 14.7% (25) in November 1989, 17.1% (27) in November 1990, and 21.9% (33) in November 1991; for the 1989-90 treatment group, 9.3% (19) in November 1990 and 12.4% (23) in November 1991; and for the 1990-91 treatment group, 4.1% (6) in November 1991. Over the three follow-up years, service for communication disorders related to speech, hearing, and language problems occurred more frequently in the year directly following a pupil's enrollment in the Reading Recovery program, with increasing numbers of pupils served for developmental handicaps and learning disabilities in subsequent years. The percentages of discontinued versus not discontinued pupils in special education were compared within each grade-level and within each follow-up year within each treatment group. In general, results indicated that higher percentages of not discontinued pupils than discontinued pupils were in special education.

Table 21

Percent and Number of Pupils in the 1988-89 Reading Recovery Treatment Group by Special Education Status in November 1989, 1990, and 1991

Follow-Up Year Grade as of:	Pupil Category	Special Education Status: Not In Special Education %	(N)	In Special Education: Communication Disorder %	(N)	Developmental Handicap %	(N)	Learning Disability %	(N)	Subtotal %	(N)	Total %	(N)
11/89													
1	Discontinued	100.0	(3)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	100.0	(3)
	Not Discontinued	66.7	(22)	6.1	(2)	18.2	(6)	9.1	(3)	33.3	(11)	100.0	(33)
	Subtotal	69.4	(25)	5.6	(2)	16.7	(6)	8.3	(3)	30.6	(11)	100.0	(36)
2	Discontinued	92.2	(83)	7.8	(7)	0.0	(0)	0.0	(0)	7.8	(7)	100.0	(90)
	Not Discontinued	84.1	(37)	9.1	(4)	4.5	(2)	2.3	(1)	15.9	(7)	100.0	(44)
	Subtotal	89.6	(120)	8.2	(11)	1.5	(2)	0.7	(1)	10.4	(14)	100.0	(134)
	Total	85.3	(145)	7.6	(13)	4.7	(8)	2.4	(4)	14.7	(25)	100.0	(170)
11/90													
1	Discontinued	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
	Not Discontinued	0.0	(0)	0.0	(0)	100.0	(1)	0.0	(0)	100.0	(1)	100.0	(1)
	Subtotal	0.0	(0)	0.0	(0)	100.0	(1)	0.0	(0)	100.0	(1)	100.0	(1)
2	Discontinued	87.5	(7)	12.5	(1)	0.0	(0)	0.0	(0)	12.5	(1)	100.0	(8)
	Not Discontinued	70.5	(31)	2.3	(1)	20.5	(9)	6.8	(3)	29.5	(13)	100.0	(44)
	Subtotal	73.1	(38)	3.8	(2)	17.3	(9)	5.8	(3)	26.9	(14)	100.0	(52)
3	Discontinued	92.5	(74)	7.5	(6)	0.0	(0)	0.0	(0)	7.5	(6)	100.0	(80)
	Not Discontinued	76.0	(19)	8.0	(2)	12.0	(3)	4.0	(1)	24.0	(6)	100.0	(25)
	Subtotal	88.6	(93)	7.6	(8)	2.9	(3)	1.0	(1)	11.4	(12)	100.0	(105)
	Total	82.9	(131)	7.0	(11)	7.6	(12)	2.5	(4)	17.1	(27)	100.0	(158)

(table continues)

Table 21 (continued)

Percent and Number of Pupils in the 1988-89 Reading Recovery Treatment Group by Special Education Status in November 1989, 1990, and 1991

Follow-Up Year Grade as of:	Pupil Category	Special Education Status: Not In Special Education %	(N)	In Special Education: Communication Disorder %	(N)	Developmental Handicap %	(N)	Learning Disability %	(N)	Subtotal %	(N)	Total %	(N)
11/91													
3	Discontinued	84.6	(11)	7.7	(1)	0.0	(0)	7.7	(1)[a]	15.4	(2)	100.0	(13)
	Not Discontinued	56.3	(27)	0.0	(0)	27.1	(13)	16.7	(8)	43.8	(21)	100.0	(48)
	Subtotal	62.3	(38)	1.6	(1)	21.3	(13)	14.8	(9)	37.7	(23)	100.0	(61)
4	Discontinued	94.2	(65)	4.3	(3)	0.0	(0)	1.4	(1)	5.8	(4)	100.0	(69)
	Not Discontinued	71.4	(15)	4.8	(1)	9.5	(2)	14.3	(3)	28.6	(6)	100.0	(21)
	Subtotal	88.9	(80)	4.4	(4)	2.2	(2)	4.4	(4)	11.1	(10)	100.0	(90)
	Total	78.1	(118)	3.3	(5)	9.9	(15)	8.6	(13)	21.9	(33)	100.0	(151)

[a]Pupil was categorized as behavior handicapped.

Table 22

Percent and Number of Pupils in the 1989-90 Reading Recovery Treatment Group
by Special Education Status in November 1990 and 1991

Follow-Up Year Grade as of:	Pupil Category	Special Education Status: Not In Special Education %	(N)	In Special Education: Communication Disorder %	(N)	Developmental Handicap %	(N)	Learning Disability %	(N)	Subtotal %	(N)	Total %	(N)
11/90													
1	Discontinued	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)
	Not Discontinued	71.4	(20)	25.0	(7)	0.0	(0)	3.6	(1)	28.6	(8)	100.0	(28)
	Subtotal	71.4	(20)	25.0	(7)	0.0	(0)	3.6	(1)	28.6	(8)	100.0	(28)
2	Discontinued	95.6	(131)	4.4	(6)	0.0	(0)	0.0	(0)	4.4	(6)	100.0	(137)
	Not Discontinued	87.2	(34)	10.3	(4)	2.6	(1)	0.0	(0)	12.8	(5)	100.0	(39)
	Subtotal	93.8	(165)	5.7	(10)	0.6	(1)	0.0	(0)	6.3	(11)	100.0	(176)
	Total	90.7	(185)	8.3	(17)	0.5	(1)	0.5	(1)	9.3	(19)	100.0	(204)
11/91													
2	Discontinued	90.0	(9)	10.0	(1)	0.0	(0)	0.0	(0)	10.0	(1)	100.0	(10)
	Not Discontinued	74.3	(26)	11.4	(4)	2.9	(1)	11.4	(4)	25.7	(9)	100.0	(35)
	Subtotal	77.8	(35)	11.1	(5)	2.2	(1)	8.9	(4)	22.2	(10)	100.0	(45)
3	Discontinued	92.8	(103)	5.4	(6)	0.0	(0)	1.8	(2)[a]	7.2	(8)	100.0	(111)
	Not Discontinued	83.3	(25)	3.3	(1)	3.3	(1)	10.0	(3)[a]	16.7	(5)	100.0	(30)
	Subtotal	90.8	(128)	5.0	(7)	0.7	(1)	3.5	(5)	9.2	(13)	100.0	(141)
	Total	87.6	(163)	6.5	(12)	1.1	(2)	4.8	(9)	12.4	(23)	100.0	(186)

[a]One pupil was categorized as behavior handicapped.

Table 23

Percent and Number of Pupils in the 1990-91 Reading Recovery Treatment Group
by Special Education Status in November 1991

Follow-Up Year Grade as of:	Pupil Category	Special Education Status: Not In Special Education %	(N)	In Special Education: Communication Disorder %	(N)	Developmental Handicap %	(N)	Learning Disability %	(N)	Subtotal %	(N)	Total %	(N)
11/91													
1	Discontinued	100.0	(1)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	100.0	(1)
	Not Discontinued	100.0	(5)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	100.0	(5)
	Subtotal	100.0	(6)	0.0	(0)	0.0	(0)	0.0	(0)	0.0	(0)	100.0	(6)
2	Discontinued	95.5	(107)	4.5	(5)	0.0	(0)	0.0	(0)	4.5	(5)	100.0	(112)
	Not Discontinued	96.3	(26)	3.7	(1)	0.0	(0)	0.0	(0)	3.7	(1)	100.0	(27)
	Subtotal	95.7	(133)	4.3	(6)	0.0	(0)	0.0	(0)	4.3	(6)	100.0	(139)
	Total	95.9	(139)	4.1	(6)	0.0	(0)	0.0	(0)	4.1	(6)	100.0	(145)

Summary/Recommendations

In 1990-91 the Reading Recovery program was located in 38 elementary schools and had a staff of 60 teachers (20.0 FTEs). For evaluation purposes, the program started on September 24, 1990 and continued through May 17, 1991. The program served a total of 297 underachieving first-grade pupils who appeared unlikely to read successfully without intensive instruction. These 297 pupils were enrolled in the program for an average of 64.8 days, attended the program an average of 56.1 days, and received an average of 46.1 lessons. The number of lessons received ranged from none to 118.

Pupils were discontinued from the program based on scores on diagnostic measures indicating that they were reading at the level of their classroom and based on teacher judgment that the pupils had developed effective reading strategies. Of the 297 pupils served, 40.4% (120) were discontinued, 11.4% (34) received 60 or more lessons but were not discontinued, and 48.1% (143) were not discontinued and received less than 60 lessons. Of the 79 pupils who received 60 or more lessons, 57.0% (45) were discontinued.

The treatment group consisted of the 154 pupils who were either discontinued (120) or received 60 or more lessons but not discontinued (34). The evaluation sample consisted of the 139 pupils who were discontinued or had 60 or more lessons, were English-speaking, and had received a valid score on both the MAT6 pretest and posttest. The three desired outcomes for the 1990-91 Reading Recovery program were met. Of the 139 pupils in the evaluation sample, 69.8% (97) had an NCE gain of 3.0 or better (desired outcome was 50.0%). Of the 154 pupils in the treatment group, retention data were available for 153. Of these, 96.1% (147) were not retained in grade one. Of the 154 treatment group pupils, 98.1% (151) had parental involvement in the program (the desired outcome for retention was 50.0% and parent involvement was 75.0%).

The mean NCE scores on the pretest and posttest were 22.9 (national percentile rank 10.0) and 39.6 (national percentile rank 31.0) respectively. The average growth was 16.8 NCEs. Overall, 91 (65.5%) of the 139 evaluation sample pupils gained 7.0 or more NCEs. Forty-three (30.9%) of the evaluation sample pupils reached the average NCE (45.6) for the district as a whole. The percentages of pupils who were at various percentile levels on the posttest were as follows: (a) 23.7% (33) were at the 50%ile or above (grade level); and (b) 62.6% (87) were below the 37%ile and still eligible for Chapter 1 services.

The Classroom Teacher Survey included ratings related to the reading performance in 1990-91 of pupils who received Reading Recovery in 1989-90. On a scale that ranged from 5 (very successful) to 1 (very unsuccessful), the average ratings on four reading items were as follows. For grade 1 (retained pupils), the average ratings ranged from 3.14 to 2.93. For grade 2 pupils, the average ratings ranged from 3.40 to 3.10. By pupil category, discontinued pupil average ratings for the four items ranged from 3.57 to 3.25, compared with 2.96 to 2.62 for not discontinued pupils. Of the teachers responding to the survey who had the Reading Recovery program serving children at their school during 1990-91, 80.8% (42) found the program to be of value to their pupils, and 75.5% (40) found the funding for the program appropriate.

The costs per pupil served in compensatory programs were compared. The cost per pupil served in Reading Recovery ($2,667) indicated that the 1990-91 Reading Recovery program was expensive to maintain in comparison to the other compensatory education programs. The costs per pupil served for the other

programs were $697 for the Instructional Assistant program and $655 for the Early Literacy program (grade 1).

Analyses of the long-term effects of Reading Recovery produced the following results. Of the former Reading Recovery pupils who were in a school and at a grade level where a compensatory education program was in operation in 1990-91, 48.8% (79) of the pupils from the 1988-89 treatment group and 47.3% (98) of the pupils from the 1989-90 treatment group were served in a compensatory program.

When tested in second grade, the district average NCE score in Vocabulary was reached by 17.0% (27) of the pupils from the 1989-90 treatment group. The district average NCE score for Vocabulary was 47. The district average NCE score in Reading Comprehension (48) was reached by 23.9% (38) of the pupils from the 1989-90 treatment group. In Total Reading, the district average NCE score (47) was reached by 20.8% (33) of the pupils from the 1989-90 treatment group. In Total Reading, 33.0% of the 1988-89 treatment group reached the 37%ile and 14.9% reached the 50%ile; 30.2% of the 1989-90 treatment group reached the 37%ile and 12.6% reached the 50%ile. In Vocabulary, 26.6% of the 1988-89 treatment group reached the 37%ile and 13.8% the 50%ile. For the 1989-90 treatment group, 27.7% reached the 37%ile and 14.5% the 50%ile. For Reading Comprehension, 33.0% of the 1988-89 treatment group reached the 37%ile and 21.3% the 50%ile, while for the 1989-90 treatment group, 33.3% reached the 37%ile and 17.0% the 50%ile in Reading Comprehension.

Of the 469 pupils from the combined 1988-89, 1989-90, and 1990-91 treatment groups who remained in Columbus Public Schools through November 1991, 77.2% (362) followed a normal grade-level progression. The retention rates for grade 1 were: 21.6% for the 1988-89 treatment group, 13.7% for the 1989-90 treatment group, 4.1% for the 1990-91 treatment group, and 13.7% for the three treatment groups combined.

The percentages of pupils from the treatment groups who were served in special education were: for the 1988-89 treatment group, 14.7% in November 1989, 17.1% in November 1990, and 21.9% in November 1991; for the 1989-90 treatment group, 9.3% in November 1990 and 12.4% in November 1991; and for the 1990-91 treatment group, 4.1% in November 1991. Pupils were served more frequently for communication disorders related to speech and hearing problems in the year directly following their enrollment in Reading Recovery, with increasing numbers of pupils served for developmental handicaps and learning disabilities in subsequent years.

The Reading Recovery program has been continued during the 1991-92 school year, and it is recommended that it continue. With that in mind, the following recommendations are presented:

1. Efforts should continue for exploring ways to minimize the amount of time needed to collect data on pupils served. Much teacher frustration exists because of the volume of record keeping required for the program. Teachers maintain records for both Columbus Public Schools and The Ohio State University College of Education. If both institutions used the same set of data, reporting by both institutions would be consistent and the amount of paperwork required of teachers reduced.

2. The Reading Recovery program needs to establish an absolute rather

than relative criterion for discontinuing pupils that will ensure that discontinued pupils are nearer to the 36th national percentile cut off for Chapter 1 eligibility. During 1990-91, more than 50% of the discontinued pupils still qualified for a Chapter 1 program.

3. The earliest possible identification of pupils needing special education instruction should be emphasized. Pupils with special needs can be better served by teachers with expertise in specific special education areas. Reading Recovery is not a special education program. If pupils with special education are not identified early, they remain in the Reading Recovery program too long, creating frustration for both pupils and teachers.

4. With the comparatively high cost of the program, funding should be closely monitored. The cost of the program should be scrutinized in terms of the number of pupils served, the percent discontinued, the percent of pupils retained in grade 1, and the percent of pupils needing further compensatory education service.

5. A process needs to be established to provide the program evaluator an opportunity to visit program sites to observe the day-to-day operation of the instructional program. These visits provide invaluable information for the program evaluator in the areas of content and instruction and provide program teachers the opportunity to clarify questions they may have about evaluation requirements and record keeping. These visitations also help build a rapport between the program teacher and program evaluator.

6. The process and instruments established for recording and collecting program data during the 1990-91 school year should be continued during the 1991-92 school year. Most program teachers found the instruments easy to understand and complete, making data collection at the end of the school year an efficient process.

7. Inservice meetings should be continued to provide program teachers the opportunity to enhance their instructional intervention skills, to share instructional ideas with one another, and to clarify any concerns or misconceptions they may have about the total Reading Recovery program.

8. During 1990-91 various teacher organizational models existed for serving pupils. These included a classroom/Reading Recovery/Early Literacy grade 1 model, and a Reading Recovery/Early Literacy grade 1 and 2 model. A more consistent model needs to be established for the program so that program coordinators and teachers can focus on intervention strategies for underachieving pupils.

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Appendix A

Teacher Census Form (TCF)

1990-91
Teacher Census Form

Social Security Number __ __ __-__ __-__ __ __ __

Name _____

School Assignment _____ Cost Center __ __ __

Your Teacher Leader _____

List Chapter 1 - DPPF programs you are involved with:

	Program	Program Code
1.	_____	__ __ __ __ __
2.	_____	__ __ __ __ __
3.	_____	__ __ __ __ __
4.	_____	__ __ __ __ __

Full-Time Employee _____

or (check one)

Part-Time Employee _____

Percent of day teaching RR _____%

Percent of day teaching Early Literacy _____%

Percent of day serving as classroom teacher _____%

Appendix B

Calendar Worksheet/Parent Involvement Log (CW/PIL)

* REVISED CALENDAR WORKSHEET FOR COMPUTING DAYS OF PUPIL ENROLLMENT AND ATTENDANCE *

1990-91

Reading Recovery

Student's Name _____ RR Teacher Name _____

Student's Birthdate _ _ _ _ _ _ (M M D D Y Y)

Note: Please keep original worksheets for all pupils (even for pupils who leave). Do not send to program coordinator or to other RR schools.

Program Code _ _ _ _ _

School _____

Student Number _ _ _ _ _ _

Grade Level _ _

School Code _ _ _

Race Code _____ (1-5) Sex _____ (M OR F)

Service Index Number _ _._

(Enroll-Abs.=Attend.)

1990-91	M	T	W	TH	F	M	T	W	TH	F	M	T	W	TH	F	M	T	W	TH	F	Days Enroll.	Days Absent	Days Attend.
Aug. 27 - Sept. 21	M	M	29	30	31	H	4	5	6	7	10	11	12	13	14	17	18	19	20	21	Do not count enroll/absent/		
(No enrollment days)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	attend before Sept. 24		
Sept. 24 - Oct. 19	24	25	26	27	28	1	2	3	4	5	8	9	10	11	12	15	16	17	18	COTA			
(Max. enroll. days=19)																				0			
Oct. 22 - Nov. 16	22	23	24	25	26	29	30	31	1	2	5	6	7	8	9	12	13	14	15	PC			
(Max. enroll. days=19)																				0			
Nov. 19 - Dec. 14	19	20	21	H	N	26	27	28	29	30	3	4	5	6	7	10	11	12	13	14			
(Max. enroll. days=18)				0	0																		
Dec. 17 - Jan. 18	17	18	19	N	N	N	N	N	3	4	7	8	9	10	11	14	15	16	17	18			
(Max. enroll. days=15)				0	0	0	0	0															
Jan. 21 - Feb. 15	H	22	23	24	25	28	29	30	31	1	4	5	6	7	8	11	12	13	14	PC			
(Max. enroll. days=18)	0																			0			
Feb. 18 - Mar. 15	18	19	20	21	22	25	26	27	28	1	4	5	6	7	8	11	12	13	14	15			
(Max. enroll. days=20)																							
Mar. 18 - Apr. 12	18	19	20	21	22	25	26	27	28	N	N	N	N	N	N	8	9	10	11	12			
(Max. enroll. days=14)										0	0	0	0	0	0								
Apr. 15 - May 10	15	16	17	18	19	22	23	24	25	26	29	30	1	2	3	6	7	8	9	10			
(Max. enroll. days=20)																							
May 13 - June 7	13	14	15	16	17	20	21	22	23	24	H	28	29	30	31	3	4	5	6	R			
(Max. enroll. days=5)						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

TOTALS: (Max. Enroll. = 148) (Max. Attend. = 148)

Enroll.	Absence	Attend

SERVICE CODES 0 = Pupil Not Scheduled (Inservice, Teacher Illness, Personal Day, Snow Day Parent Conference Day, etc.)
1 = Pupil Scheduled and Not Served (Absent from School/Class)
2 = Pupil Served - One Lesson
3 = Pupil Served - Two Lessons
9 = Pupil Roaming in the Known

RACE CODES: 1 = Non Minority, 2 = Black, 3 = Spanish Surname, 4 = Asian American, 5 = American Indian

Lessons

71

72

49

EVALSRVCS/P501/RRORIEN90

09/20/90

ESEA - Chapter 1
Parent Involvement Log
1990-91

Program Code _____ Name of Pupil _____ Grade _____

Parent Name _____ Address _____ Phone Number _____

THE COLLECTION OF PARENT INVOLVEMENT DATA IS REQUIRED BY CHAPTER 1.

Please check if the following two activities occurred for this pupil anytime this year.

☐ Parent helped child with homework

☐ Parent read to child or child read to parent

DIRECTIONS: Please indicate in the fields below the activity, name of parent/guardian, and the hours they were involved in the Chapter 1 project. ROUND HOURS TO THE NEAREST TENTH. Obviously, you may keep expanded notes about activities somewhere else.

Date MMDDYY	Activity* (1-5)	Attendee(s) Parent/Guardian	Hours 00.0	Entered on Computer MMDDYY
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____
_____	_____	_____	__.__	_____

*Kinds of Parent Involvement to record for the column labeled Activity

(1) Involved in planning (do not include advisory council)
(2) Group meetings (do not include advisory council)
(3) Individual conferences (telephone conferences included)
(4) Parental classroom visits
(5) Home visits

EVALSRVCS/CHAPTER 1/ESEAPIL91

Appendix C

Pupil Data Sheet (PDS)

COLUMBUS PUBLIC SCHOOLS COMPENSATORY EDUCATION
PUPIL DATA SHEET - READING RECOVERY

SCHOOL CODE | | | | PROGRAM CODE | | | | | | SSN | | | | | | | | | |

School Name _____ Program Name _____ Teacher Name _____

1. _____ _____ _____
| | | | | | | | | |

Appendix D

Classroom Teacher Survey

COLUMBUS PUBLIC SCHOOLS

READING RECOVERY
P R O G R A M

Classroom Teacher Survey

1990-91

The purposes of this survey are to find out what you think about the reading performance of pupils currently in your room who were served by the Reading Recovery Program in 1989-90 and to find out your opinions of the Reading Recovery Program. Your opinions are an important part of program evaluation. Please answer each item carefully. There are no right or wrong answers. Complete the survey and return it to Program Evaluation via school mail (by folding and stapling the survey in reverse) by May 17, 1991. The answers **you give will be completely confidential.** No reporting will be done for individual pupils or teachers. Thank you for your cooperation.

Directions:

1. Look at the **white printout** (next page) containing the names of pupils currently in your room who were served by the Reading Recovery Program **last year.**

2. FOR EACH PUPIL LISTED ON THE PRINTOUT, **COPY THE STUDENT NUMBER** AND **LAST NAME** AND **CIRCLE THE GRADE LEVEL** FROM THE PRINTOUT ONTO THE TOP OF THE SURVEY FORM WHICH IMMEDIATELY FOLLOWS THE PRINTOUT. THIS INFORMATION IS ESSENTIAL FOR THE SURVEY ANALYSIS.

3. **Please answer items 1-21 for each pupil.** If you have more than one pupil listed on your survey, please complete all items for the first pupil **before beginning items for the next pupil.**

4. **Answer the remaining questions about the Reading Recovery Program and about the grade(s) you teach.**

5. Provide comments as indicated.

For items 1 - 13, circle the one response that best represents your opinion.

1. Is this pupil currently in your room?

2. Has this pupil been in your room long enough for you to evaluate his or her reading performance?

For items 3 - 13 use the following key:

3. Reads and understands basal reading stories

4. Reads and understands supplemental reading materials used for instruction

5. Reads library books

6. Understands assignments

7. Works independently

8. Finishes seatwork

9. Practices self control

10. Writes own stories

11. Makes progress in reading group

12. Usually knows how to figure out new words

13. Attends class regularly

Pupil #1 Student # _____ Name: _____ Grade: K 1 2 3	Pupil #2 Student # _____ Name: _____ Grade: K 1 2 3	Pupil #3 Student # _____ Name: _____ Grade: K 1 2 3	Pupil #4 Student # _____ Name: _____ Grade: K 1 2 3
YES NO YES NO	YES NO YES NO	YES NO YES NO	YES NO YES NO
If No, then do not rate this child but rate any other pupils as appropriate AND be sure to go to item 22.	If No, then do not rate this child but rate any other pupils as appropriate AND be sure to go to item 22.	If No, then do not rate this child but rate any other pupils as appropriate AND be sure to go to item 22.	If No, then do not rate this child but rate any other pupils as appropriate AND be sure to go to item 22.
5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1
5 4 3 2 1	5 4 3 2 1	5 4 3 2 1	5 4 3 2 1

(Continued)

For items 14-21, circle the one response that best represents your opinion.	Pupil #1 (Same pupil as previous page) Name:	Pupil #2 (Same pupil as previous page) Name:	Pupil #3 (Same pupil as previous page) Name:	Pupil #4 (Same pupil as previous page) Name:
Achieves suggested passing score on basal test in the area of:				
14. Comprehension	YES NO NOT SURE	YES NO NOT SURE	YES NO NOT SURE	YES NO NOT SURE
15. Vocabulary	YES NO NOT SURE	YES NO NOT SURE	YES NO NOT SURE	YES NO NOT SURE
16. Decoding	YES NO NOT SURE	YES NO NOT SURE	YES NO NOT SURE	YES NO NOT SURE
17. Is in the following reading group in my classroom	HIGH MIDDLE LOW	HIGH MIDDLE LOW	HIGH MIDDLE LOW	HIGH MIDDLE LOW
18. Earned the following letter grade in reading in the last grading period (Circle NA=NOT APPLICABLE if pupil was not enrolled):	A B C D F NA	A B C D F NA	A B C D F NA	A B C D F NA
19. Will be retained at the end of this school year	YES NO NOT SURE	YES NO NOT SURE	YES NO NOT SURE	YES NO NOT SURE
20. Was this a non-English speaking student (ESL)?	YES NO NOT SURE	YES NO NOT SURE	YES NO NOT SURE	YES NO NOT SURE
21. Did this pupil become qualified for a Special Education program during 1990-91?	YES NO NOT SURE	YES NO NOT SURE	YES NO NOT SURE	YES NO NOT SURE

(Continued)

Items 22-24 concern the Reading Recovery Program.

22. Is the Reading Recovery Program serving your school this year? (Please circle your response.)

YES — If YES then go to item 23

NO — If NO then go to item 25

For items 23-24 circle the one response that best represents your opinion about each item. Use the following response key:

SA = Strongly Agree
A = Agree
U = Undecided
D = Disagree
SD = Strongly Disagree
DK = Don't Know

SA A U D SD DK

23. The Reading Recovery Program is of value to pupils in my school. SA A U D SD DK

24. Compared to other ways that money could be spent for compensatory reading programs in my school, I support the funding of the Reading Recovery Program. SA A U D SD DK

25. Circle the grade(s) you presently teach. 1 1-2(split) 2 2-3(split) OTHER _____

26. If you teach Special Education, please specify what type (otherwise leave this item blank). Type of Special Ed. _____

You may use the space below to explain one or more of your answers or to comment on the Reading Recovery Program in general.

27. Comments: _____

_____

_____

Thank you! Please return this survey by **May 17, 1991.**

Appendix E

Comments from the Classroom Teacher Survey

Columbus Public Schools
Reading Recovery Program

CLASSROOM TEACHER SURVEY COMMENTS
1990-91

We need more Reading Recovery teachers at the 1st grade level.

I have had [pupil] in my class since January 29, 1991. She has had an unstable family life. Her grades were better at her previous school than in my class. Her total points right on her last 3 reading tests in the basal reader have been 7/10-Unit 4, 6/10-Unit 5, 4/10-Unit 6. We do not have a suggested passing score on our tests.

The reading series this year is a new one- I feel that had it been Ginn- (lots of dittos, easier stories), these 2 students would have done better.

Please continue Reading Recovery at [school]!!

[Pupil] has been recommended for testing for DH. The psychologist agrees that he will probably qualify, but because of his heavy schedule he won't be able to test him this year. He wants him tested next year. [Pupil] was enrolled in school in New York for several months this year.

I can't see that this program is successful enough to justify the price of 2 teachers. I'm not pleased with the results I have seen over the years. It is a band-aide on a much more serious problem. Money could be better spent elsewhere. The few successes are not worth the price or time.

[Pupil] was retained from the 89-90 school year. He repeated 1st grade this year. He started in my class and then moved to Georgia for approx. 5 months. While reading his Georgia records I discovered he was in their FOCUS reading program. From reading the record I understand it to be a program where they teach decoding skills. I believe the Reading Recovery effort from Columbus Schools was lost or damaged when [pupil] was put in the Georgia FOCUS program. He unlearned what R.R. gave him.

I feel students benefit from the extra attention they get from this program.

We currently <u>need</u> more RR teachers at [school] as we have 5 first grades.

It was difficult to grade [pupil] on items listed because she does absolutely nothing in school. There is no parent cooperation. [Pupil] comes from an environment not conducive for learning. She has very poor peer relationships. I think she can do her work, but I have nothing to evaluate her on.

We could use more Reading Recovery teachers in our building. So many children qualify but not enough Reading Recovery teachers to help them.

The evaluation process used in Reading Recovery doesn't seem to allow room for changing students as the ability changes.

[Pupil] came as a first grade retention this year. His previous teachers

had concerns whether he might be DH, but he has performed beautifully. An average or above reader, enthusiastic and highly motivated.

[Pupil] is a repeat and has done really well this year with most of his school work. But reading for him is very difficult. He has not improved in this area very much. He does seem to be a much better writer but his reading of new words, old words, whatever, is a problem. I believe he has some type of learning disability. Reading Recovery was not successful for this reason for him.

I was surprised that [pupil] had been in the program. [Pupil] is very withdrawn & will have trouble succeeding until she asserts herself.

These two students would have benefitted from second grade Early Literacy but were too high on the waiting list to get this continued help from our reading teacher.

I like the person who is our Reading Recovery teacher. She's a hard worker. [Pupil] has been going to a Dublin learning problems clinic? school? - Dr. [name]. Her parents had her enrolled there before she came to us. Her progress or lack of progress is no reflection on me or our Reading Recovery teacher, I feel.

At our school, we have a simulated RR program because an individual did not complete the training. RR is an advantage to a school and the students involved. Lets hope that RR can continue in <u>full force</u>!

I am so proud of our Reading Recovery program. I do not have enough superlative adjectives at my command with which to praise this program!

I have not been given adequate information regarding the Reading Recovery Program (in my opinion).

[Pupil] is not in Reading Recovery this year because he was retained and tested high at the beginning of the year. I wish I could enter students in the Reading Recovery program during the year.

I don't know very much about Reading Recovery, but I assume it's helping kids who need help. I hope it's like Chapter 1, which I think is great too.

The Reading Recovery Program is a vital program in our school because it provides students with the individual assistance that is needed to develop good reading skills (comprehension, etc.) that they would not necessarily get in the home setting. We need Reading Recovery. Make sure it stays in our school system and our school.

I am very concerned that [pupil] was not eligible for CBE. A summer of no reading, added to shaky knowledge of Reading Recovery concepts, left her totally unprepared to handle 2nd grade. This, added to our new reading program which lacks basic word attack skills, has left [pupil] unable to succeed in 2nd grade. She will be retained in 2nd grade. However, retention last year would have been far better — she lacks 1st grade skills still.

I strongly believe that we need the Reading Recovery Program. Since I teach second grade, the program was called Early Literacy. However, our

teacher had not many guidelines and very few teaching materials (this teacher should have access to all teacher guides, charts, and books for all grade levels she instructs.) Also, there was not much co-ordination from the administration with regard to projects or reports expected from the reading teacher - hence, her workload was often too much. Spring testing within reading program took too much valued reading time away from our students.

I'd rather have the 1st grade aide program. She helps many more children for MUCH longer periods of time. The aide did as much or more for the R.R. child.

The program has done wonders for a couple of my children that had little or no skills in first grade. To get rid of this program would do great harm/damage to those children that are progressing in the program. Eliminate alot of other areas before eliminating this one!

Of the 4 Reading Recovery people we have had at [school], [teacher] is by far the best. I have really seen progress in her students this year.

I see a big improvement in the reading of the children in the program.

This is program that needs to be saved in its original form and be available to each child and not spread too thin.

I think RR is a super program in its "one-on-one" form. However, unless there is money to service every child who qualifies, it's not a cost effective program. I also think it should be put in place at 2nd grade, so that the program can better target those that can benefit the most from it.

I believe in the Reading Recovery program because it gives individual attention to children who truly need it at the very beginning of their reading acquisition.

Question #18 - I circled it because we gave our students only O, S or I grades. Had I been giving letter grades [pupil] would have received an A or B.